CANADIAN CERTIFIED GENERAL ACCOUNTANTS' ASSOCIATION

CGA
CANADA

FINAL EXAMINATION

QUESTIONS, COMMENTS & SUGGESTED SOLUTIONS

JANUARY / MARCH / JUNE
1980

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PREFACE

This booklet contains reprints of the Final Examinations, along with Suggested Solutions, in all the courses offered by the Certified General Accountants' Association for the Academic Year. In most cases, the Examiner has provided comments on the undergraduates' performance in order to emphasize the areas in which the students appeared to have the most difficulties, or have performed well.

The purpose of publishing these Final Examinations and Suggested Solutions is to give the undergraduates *an indication* of the degree of complexity of the examinations. **In no way are these examinations intended as an indication of the total body of knowledge that a student is expected to have mastered for the applicable course.**

The users of this booklet should realize that certain types of questions may not be applicable to their current courses because of changes in course content. In many cases, particularly in the Income Tax and Law courses, the Suggested Solutions to some questions and references to texts, lesson notes or statutes will be applicable only in the year published because of subsequent changes to these course materials or to the relevant statutes.

INDEX

NOTES:

1. In 1979/80 academic year, Accounting 221 was split into two courses, Accounting 211 and Accounting 222.
2. In 1979/80 academic year, Economics 304 was re-numbered Economics 104.
3. In 1979/80 academic year, Financial Controllership 516 was re-numbered Financial Controllership 316.

CANADIAN CERTIFIED GENERAL ACCOUNTANTS' ASSOCIATION
ACCOUNTING 101 EXAMINATION
JANUARY 1980

Note: Two present value tables attached.

Marks

Time: 3 Hours

10 Q. 1. Accounting is a system for identifying, measuring, recording and communicating financial information about an economic unit but usually serves two main functions.

Required:

(2) (a) Identify the two main functions suggested.

(8) (b) In a few sentences indicate your understanding of what each does.

8 Q. 2. Some of the accounts of the Regal Supply Company are listed below in a "trial balance" and an "adjusted trial balance". Regal has numerous other accounts, of course, which are not indicated.

	Trial Balance	Adjusted Trial Balance
Sales Salaries	3,750 dr.	4,000 dr.
Prepaid Rent	0	400 dr.
Rental revenue	200 cr.	100 cr.
Accumulated depreciation	350 cr.	500 cr.

Required:

Reconstruct the adjusting journal entries that were responsible for each of these account changes. (Narratives not required).

10 Q. 3. The following relate to the activities of Eastern Manufacturing Company Ltd.:

(1) As at June 30, the "Cash on hand and in bank" account in Eastern's General Ledger showed a balance of $1,250.

(2) The June bank statement showed a balance of $64 in Eastern's bank account.

(3) Of four cheques not returned by the bank in May, for May and prior periods, one still has not been returned in June as follows:

Cheque No. 208 in the amount of $80.00.

(4) Eastern Manufacturing Co. includes its petty cash fund in the amount of $50.00 in the General Ledger "Cash on hand and in bank" account. Accordingly the company states its cash in bank is $1,200.00.

(5) Eastern deposited cash received on June 29 (in the amount of $1,000.00) and June 30 (in the amount of $200) in the night depository as June 29 and 30, were a Saturday and Sunday respectively.

(6) On checking the cheques returned with the bank statement, Eastern found the following:

(a) A cheque properly made out for $45.00 was worded as a debit to office expense and a credit to cash for $54.00.

(b) A cheque of Western Company in the amount of $200.00 was incorrectly processed through Eastern Company's bank account by the bank.

(7) Bank service charges for the month totalled $5.00.

(8) A cheque for $180.00 written in June was not returned with the cancelled cheques.

Required:

(8) (a) Prepare a bank reconciliation statement as at June 30, 1979.

(2) (b) Prepare a journal entry or entries which would appear in the Eastern' Company's General Journal to adjust the General Ledger Cash account to its correct total at June 30.

18 Q. 4. The XYZ Corporation issued and sold $2,000,000 par value 10%, 4 year bonds on January 1, 1980. The bonds paid interest quarterly on January 1, April 1, July 1 and October 1. The market rate on the date of issue was 12%.

Note: Present Value Tables attached.

Required: (Calculate to nearest dollar)

(2) (a) Calculate the quartely interest payments to be made by the corporation.

(7) (b) Calculate the present value of the bond issue. Prepare journal entry to record the bond issue on the books of the corporation.

(3) (c) Prepare journal entries to record interest payments on April 1, 1980. Use the INTEREST METHOD of amortization, not straight line.

(3) (d) The company's year end is June 30, 1980. Prepare the journal entry to record interest expense on that date.

(3) (e) Calculate the carrying value of Bonds Payable on June 30, 1980.

19 Q 5. Four machines were purchased by Alpha Co. Ltd. during 1976 and 1977. Machine A was finally placed in use at the end of August, 1976. The cost was $26,400, the estimated life 8 years and company personnel estimated salvage value would amount to $2,400. Depreciation was to be on a straight line basis.

Machine B was ready for use October 1, 1976. Depreciation was to be on a units of production basis. The cost was $23,600 with a five year life expectancy and an estimated salvage of $3,600. Estimated production over the five years would be 50,000 units of product. Three thousand units were produced in 1976, 11,500 in 1977 and 12,000 during 1978.

Machines C and D were purchased for $34,200 in April, 1977 and were in production on July 1 of that year.

Additional data are as follows:

Machine	Appraised Value	Salvage Value	Estimated Life	Installation Cost	Depreciation Method
C	16,000	1,000	6 yrs.	500	Sum of years digits
D	20,000	1,600	10 yrs.	1,000	Declining balance

The company's year end is December 31.

Required:

(12) (a) Prepare a form with the following columns:

Machine	Amount to be charged to depreciation	1976 Depreciation	1977 Depreciation	1978 Depreciation

Enter machine identification in column one and complete the information opposite each machine letter. Assume that twice the straight-line rate was used for the declining balance depreciation. Total the columns.

(4) (b) Journal entries to record payment and to record installation for Machines C and D. Installation costs were paid the date they were placed in service.

(3) (c) Journal entry to record the 1978 depreciation on the four machines.

19 Q. 6. Tilbury Manufacturing Ltd. presented the following shareholders' equity section of their Balance Sheet to their shareholders December 31, 1978:

Shareholders' Equity		
Capital Stock		
Preferred, 6% cumulative non-participating par value $100 shares; authorized 100,000 shares 4,000 shares issued	$ 400,000	
Common, $10 par value 400,000 shares authorized 200,000 shares issued	2,000,000	$2,400,000
Capital contributed by common stock-holders in excess of par value	$ 300,000	
Retained Earnings	900,000	1,200,000
		$3,600,000

During 1979 the following financial transactions took place:

Feb. 15 Declared the regular semi-annual dividend on the preferred stock and a $0.50 per share dividend on the common stock to holders of record March 5, payable April 1.

Apr. 1 Dividends were paid.

Apr. 10 Accepted subscriptions for 40,000 shares of common stock at $35.00 per share. The subscriptions were accompanied by a 25% cash down payment.

May 30 Received balance of payment and issued stock.

Aug. 15 Declared the regular semi-annual dividend on preferred stock and a dividend of $0.50 per share on the common stock to holders of record August 31, payable October 1.

Oct. 1 Paid dividends previously declared.

Dec. 1 Declared a 10% stock dividend to the common share-holders of record December 20 to be issued on January 15, 1980. The common stock closed at a price of $40 on this date on the Toronto Stock Exchange. This price was designated by the Board as the fair value for record purposes.

Dec. 31 Closed to Retained Earnings a net income of $1,444,600.

Required:

(13) (a) Journal entries to reflect the above transactions.
(6) (b) Stockholders' equity section of the Balance Sheet as at December 31, 1979.

10 Q. 7. The Southern Company Limited made the following purchases during 1979:

Jan. 7	8000 units @ $12.00	96,000
Mar. 30	8800 units @ 12.40	109,120
May 10	12000 units @ 12.00	144,000
July 4	16000 units @ 12.60	201,600
Sept. 2	6400 units @ 12.80	81,920
Dec. 14	7200 units @ 12.68	91,296

Inventory December 31, 1979, amounted to 15,200 units. Selling price during the year was stable at $16.00 per unit. Inventory January 1, 1979, amounted to 4,000 units at $11.92 per unit.

Required:

(4) (a) Prepare a schedule of inventory as at December 31, 1979 assuming a **LIFO** periodic basis.

(6) (b) Prepare an Income Statement showing Sales, Cost of Goods Sold and Gross Profit on a **FIFO** basis using data presented.

6 Q. 8. Hudsons Ltd. declared dividends totalling $92,000 when the "Shareholders' Equity" section of its balance sheet contained the following **selected** items:

Common Shares	$10 par value; 35,000 shares authorized, 30,000 shares issued.	$300,000
Preferred Shares	$100 par value 8% cumulative and participating to 10%; 3,000 shares authorized, 2,000 shares issued.	$200,000

In addition, a footnote to the balance sheet indicated that there were two years preferred dividends in arrears.

Required:

In **your examination booklet** complete the following journal entry using the above data. Show all calculations for part marks.

Dividends Common ________________

Dividends Preferred ________________

Cash Dividend Payable 92,000

100

END OF EXAMINATION

PRESENT VALUE OF $1 AT COMPOUND INTEREST:

Periods Hence	2%	3%	4%	5%	6%	7%	8%	9%	10%	11%	12%	13%	14%	15%	16%
1	0.98	0.97	0.96	0.95	0.94	0.93	0.93	0.92	0.91	0.90	0.89	0.89	0.88	0.87	0.86
2	0.96	0.94	0.93	0.91	0.89	0.87	0.86	0.84	0.83	0.81	0.80	0.78	0.77	0.76	0.74
3	0.94	0.92	0.89	0.86	0.84	0.82	0.79	0.77	0.75	0.73	0.71	0.69	0.68	0.66	0.64
4	0.92	0.59	0.86	0.82	0.79	0.76	0.74	0.71	0.68	0.66	0.64	0.61	0.59	0.57	0.55
5	0.91	0.86	0.82	0.78	0.75	0.71	0.68	0.65	0.62	0.59	0.57	0.54	0.52	0.50	0.48
6	0.89	0.84	0.79	0.75	0.71	0.67	0.63	0.60	0.57	0.54	0.51	0.48	0.46	0.43	0.41
7	0.87	0.81	0.76	0.71	0.67	0.62	0.58	0.55	0.51	0.48	0.45	0.43	0.40	0.38	0.35
8	0.85	0.79	0.73	0.68	0.63	0.58	0.54	0.50	0.47	0.43	0.40	0.38	0.35	0.33	0.31
9	0.84	0.77	0.70	0.65	0.59	0.54	0.50	0.46	0.42	0.39	0.36	0.33	0.31	0.28	0.26
10	0.82	0.74	0.68	0.61	0.56	0.51	0.46	0.42	0.39	0.35	0.32	0.30	0.27	0.25	0.23
11	0.80	0.72	0.65	0.59	0.53	0.48	0.43	0.39	0.35	0.32	0.29	0.26	0.24	0.22	0.20
12	0.79	0.70	0.63	0.56	0.50	0.44	0.40	0.36	0.32	0.29	0.26	0.23	0.21	0.19	0.17
13	0.77	0.68	0.60	0.53	0.47	0.42	0.37	0.33	0.29	0.26	0.23	0.20	0.18	0.16	0.15
14	0.76	0.66	0.58	0.51	0.44	0.39	0.34	0.30	0.26	0.23	0.21	0.18	0.16	0.14	0.13
15	0.74	0.64	0.56	0.48	0.42	0.36	0.32	0.28	0.24	0.20	0.18	0.16	0.14	0.12	0.11
16	0.73	0.62	0.53	0.46	0.39	0.34	0.29	0.25	0.22	0.19	0.16	0.14	0.12	0.11	0.09
17	0.71	0.61	0.51	0.44	0.37	0.32	0.27	0.23	0.20	0.17	0.15	0.13	0.11	0.09	0.08
18	0.70	0.59	0.49	0.42	0.35	0.30	0.25	0.21	0.18	0.15	0.13	0.11	0.10	0.03	0.07
19	0.69	0.57	0.48	0.40	0.33	0.28	0.23	0.20	0.16	0.14	0.12	0.10	0.08	0.07	0.06
20	0.67	0.55	0.46	0.38	0.31	0.26	0.22	0.18	0.15	0.12	0.10	0.09	0.07	0.06	0.05

PRESENT VALUE OF $1 RECEIVED PERIODICALLY FOR A NUMBER OF PERIODS

No. of Periods Received	2%	3%	4%	5%	6%	7%	8%	9%	10%	11%	12%	13%	14%	15%	16%
1	0.98	0.97	0.96	0.95	0.94	0.94	0.93	0.92	0.91	0.90	0.89	0.89	0.88	0.87	0.86
2	1.94	1.91	1.89	1.86	1.83	1.81	1.78	1.76	1.74	1.71	1.69	167	165	163	161
3	2.88	2.83	2.78	2.72	2.67	2.62	2.58	2.53	2.49	2.44	2.40	2.36	2.32	2.28	2.25
4	3.81	3.72	3.63	3.55	3.47	3.39	3.31	3.24	3.17	3.10	3.04	2.97	2.91	2.86	2.80
5	4.71	4.58	4.52	4.33	4.21	4.10	3.99	3.89	3.79	3.70	3.61	3.52	3.43	3.35	3.27
6	5.60	5.42	5.24	5.08	4.92	4.77	4.62	4.49	4.36	4.23	4.11	4.00	3.89	3.78	3.69
7	6.47	6.23	6.00	5.79	5.58	5.39	5.21	5.03	4.87	4.71	4.56	4.42	4.29	4.16	4.04
8	7.33	7.02	6.73	6.46	6.21	5.97	5.45	5.54	5.36	5.15	4.97	4.80	4.64	4.49	4.34
9	8.16	7.77	7.44	7.11	6.80	6.52	6.25	6.00	5.76	5.54	5.33	5.13	4.95	4.77	4.61
10	8.98	8.53	8.11	7.72	7.36	7.02	6.71	6.42	6.15	5.89	5.65	5.43	5.22	5.02	4.83
11	9.79	9.25	8.76	8.31	7.89	7.50	7.14	6.81	6.50	6.21	5.94	5.69	5.45	5.23	5.03
12	10.58	9.95	9.39	8.86	8.38	7.94	7.54	7.16	6.81	6.49	6.19	5.92	5.66	5.42	5.20
13	11.35	10.64	9.99	9.39	8.53	8.36	7.90	7.49	7.10	6.75	6.42	6.12	5.84	5.58	5.34
14	12.11	11.30	10.56	9.90	9.30	8.75	8.24	7.79	7.37	6.98	6.63	6.30	6.00	5.72	5.47
15	12.85	11.94	11.12	10.38	9.71	9.11	8.56	8.06	7.61	7.19	6.81	6.46	6.14	5.85	5.58
16	13.58	12.56	11.65	10.84	10.11	9.45	8.85	8.31	7.82	7.38	6.97	6.60	6.27	5.95	5.67
17	14.29	13.17	12.17	11.27	10.48	9.76	9.12	8.54	8.02	7.55	7.12	6.73	6.37	6.05	5.75
18	14.99	13.75	12.66	11.69	10.83	10.06	9.37	8.76	8.20	7.70	7.25	6.84	6.47	6.13	5.82
19	15.68	14.32	13.13	12.09	11.16	10.34	9.60	8.95	8.37	7.84	7.37	6.94	6.55	6.20	5.88
20	16.35	14.88	13.59	12.46	11.47	10.59	9.82	9.13	8.51	7.96	7.47	7.03	6.62	6.26	5.93

CANADIAN CERTIFIED GENERAL ACCOUNTANTS' ASSOCIATION
ACCOUNTING 101 EXAMINATION
JANUARY 1980
EXAMINER'S COMMENTS

Specific

Q.1 Many candidates received no marks on this question. Incorrect answers suggested the Balance Sheet and Income Statement as the two functions. Others named various principles and there was a general fuzziness as to what was involved for many. Others handled the question well and many received full marks.

Q.2 Relatively well handled.

Q.3 Bank reconciliation was handled well by the majority of candidates.

Q.4 Presented some difficulty for most students. In general, the candidates failed to demonstrate an understanding of the interest method of amortizing the bond discount and the use of present value tables.

Q.5 Many of the students had difficulty with the simple mathematical calculations. Other students erred in part (b) and by charging the installation charges to 'Installation Expense' rather than to Machines C and D.

Q.6 Generally most students fared well in the first part of the question. Many, however, failed to do the partial Balance Sheet and lost six full marks. The main errors were failure to recognize the proper amount for the dividends and the slipping of the decimal point in the entries involving the subscription and payment of the stock.

Q.7 This question offered some trouble for some of the students. Perhaps the most common was the computation of FIFO inventory where LIFO was called for.

Q.8 The worst handled question on the examination paper. Many students did not even attempt to answer this question. A great many of those who did, neglected to show their calculations in order to receive partial credit.

CANADIAN CERTIFIED GENERAL ACCOUNTANTS' ASSOCIATION
ACCOUNTING 101 EXAMINATION
JANUARY, 1980
SUGGESTED SOLUTIONS

10 Q. 1.

(2) (a) 1. Financial Accounting.
2. Management Accounting.

(8) (b) Financial accounting has the primary objective of communicating information to interested parties outside the business unit such as shareholders, creditors, government agencies, unions and the general public. When it comes to financial accounting, users have little if any influence, at least in the short run of what is reported to them. Outside parties must accept such information as the business chooses to supply. Since the third parties are essentially at the mercy of management and since these outsiders use accounting information from many different businesses, a need for consistency in reporting to outsiders is apparent.

Management accounting has the primary objective of providing financial information that is useful and helpful to management in the decision-making process usually referred to as planning and control. Management accounting is, therefore, an internal information system and as such is governed by rules that are tailor-made to meet the specific business unit. Because these rules are tailor-made they may and do differ from business to business. The only test these rules must meet is that of the time and form constraints set by the users of such information.

8 Q. 2.

Sales Salaries Expense	250	
Sales Salaries Payable		250
Prepaid Rent	400	
Rental Expense		400
Rental Revenue	100	
Unearned Rental Revenue		100
Depreciation Expense	150	
Accumulated Depreciation		150

10 Q. 3.

Eastern Company Ltd.
Bank Reconciliation Statement
June 30, 1979

(8)

Bank Balance as Per Co. Books	$1,250	Bank Balance as Per Bank	$ 64
Less: Petty Cash	50	Add: Outstanding Deposits	1,200
	$1,200		$1,264
Add: Cheque Error	9	Less: Outstanding Cheques	260
	$1,209		$1,004
Less: Service Charges	5	Add: Bank Error	200
	$1,204		$1,204

(1)	Service Charges Expense	5.00	
	Cash		5.00
(1)	Cash	9.00	
	Office Expense		9.00

18 Q. 4.

(2) (a) ($2,000,000) × (10% ÷ 4) = $50,000

(7) (b) P.V. of $2,000,000 bond to be received quarterly @ 3% for 16 periods 2,000,000 × .62 = $1,240,000

P.V. of $50,000 received quarterly for 16 periods when market rate is 12% 50,000 × 12.56 = 628,000

P.V. of bond issue $1,868,000

Jan. 1	Cash	$1,868,000	
	Discount on Bonds Payable	132,000	
	Bonds Payable		$2,000,000

(3) (c)

Begin Carrying Value	Expense to be recorded	Interest Paid	Discount Amortized	Unamortized Discount	Ending Carrying Value
$1,868,000	$56,040	$50,000	$6,040	$125,960	$1,874,040
$1,874,040	$56,221	$50,000	$6,221	$119,739	$1,880,261

Apr. 1	Bond Interest Expense	$56,040	
	Discount Amortized		$ 6,040
	Cash		50,000

(3) (d)

June 30	Bond Interest Expense	$56,221	
	Discount Amortized		$ 6,221
	Bond Interest Payable		50,000

(3) (e) $1,880,261

19 Q. 5.

(12) a)

Machine	Amount to be charged to Depreciation	1976 Depreciation	1977 Depreciation	1978 Depreciation
A	$24,000	$1,000	$ 3,000	$ 3,000
B	20,000	1,200	4,600	4,800
C	14,700	0	2,100	3,850
D	18,400	0	2,000	3,600
Totals	$77,100	$2,200	$11,700	$15,250

(4) b) 1977

April	Machinery	34,200	
	Cash		34,200
July 1	Machinery	1,500	
	Cash		1,500

(3) c) **1978**

Dec. 31	Depreciation Expense	15,250	
	Accumulated Depreciation-Machinery		15,250

PAGE 2 OF 4

19 Q. 6.

(13) (a)

Feb. 15	Retained Earnings	112,000	
	Dividends Payable - Preferred		12,000
	Dividends Payable - Common		100,000
Apr. 1	Dividends Payable - Preferred	12,000	
	Dividends Payable - Common	100,000	
	Cash		112,000
Apr. 10	Subscriptions Receivable Common Stock	1,400,000	
	Common Stock Subscribed		400,000
	Premium on Common Stock		1,000,000
Apr. 10	Cash	350,000	
	Subscriptions Receivable Common Stock		350,000
May 30	Cash	1,050,000	
	Subscriptions Receivable		1,050,000
May 30	Common Stock Subscribed	400,000	
	Common Stock		400,000
Aug. 15	Retained Earnings (or dividends)	132,000	
	Dividends Payable - Preferred		12,000
	Dividends Payable - Common		120,000
Oct. 1	Dividends Payable - Preferred	12,000	
	Dividends Payable - Common	120,000	
	Cash		132,000
Dec. 1	Retained Earnings (or dividends)	960,000	
	Common Stock to be Issued		240,000
	Contributed Surplus Arising from Stock Dividend		720,000
Dec. 31	Income summary	1,444,600	
	Retained Earnings		1,444,600

(6) (b) Stockholders' Equity

Capital Stock			
Preferred, 6% cumulative non participating par value $100; authorized 10,000 shares, issued 4,000 shares		$400,000	
Common, $10 par value 40,000 shares authorized, 240,000 shares outstanding	$2,400,000		
24,000 shares to be distributed	240,000	2,640,000	$3,040,000
Capital contributed by common stockholders in excess of par value		$1,300,000	
Capital arising from stock dividend		720,000	$2,020,000
Retained Earnings			1,140,600
Total Stockholders' Equity			$6,200,600

PAGE 3 OF 4

10 Q. 7.

(4) (a) Inventory on a **LIFO** basis

	Unit	Price	Cost
Jan. 1	4,000	$11.92	$ 47,680
Jan. 7	8,000	12.00	96,000
Mar. 30	3,200	12.40	39,680
	15,200		$183,360

(6) (b) Sales

47,200 units @ $16.00 per unit			$755,200
Cost of Goods Sold			
Inventory, January 1, 1979	$ 47,680		
Purchases	723,936	$771,616	
Inventory, December 31, 1979		193,376★	
			578,240
Gross Profit			$176,960

★ 1600 × 12.60 = 20,160
6400 × 12.80 = 81,920
7200 × 12.68 = 91,296
$193,376

6 Q. 8.

Dividends Common	40,000	
Dividends Preferred	52,000	
Cash Dividend Payable		92,000

Details as follows:

	Common	Preferred	Total
Arrears	-	32,000	32,000
Current	16,000	16,000	32,000
Participation	24,000	4,000	28,000
	40,000	52,000	92,000

100

END OF SOLUTIONS

PAGE 4 OF 4

CANADIAN CERTIFIED GENERAL ACCOUNTANTS' ASSOCIATION

ACCOUNTING 101 EXAMINATION
MARCH, 1980

Marks Time: 3 Hours

12 Q. 1. Transactions that increase working capital are called sources of funds and transactions that decrease working capital are uses of funds.

Required:

Name four sources and four uses of funds. Explain briefly how each affects working capital.

7 Q. 2. For the month of December, 1979, the National Company Ltd. had provided you with the following payroll information:

Gross wages	$2,306
Deductions from employees	
Unemployment Insurance	40
Income taxes	280
Canada Pension Plan	30
Hospital Insurance	40

Required:

Assume the company contributes on a 1:1 ratio for Canada Pension and Hospital Insurance and on a 1.4:1 ratio for Unemployment Insurance. Prepare the journal entries for the recording of wages and fringe benefits for the month.

14 Q. 3. The following data pertain to the Kitchener Hardware Company for the year ended December 31, 1979:

Sales Salaries	$16,400
Office Salaries Expense	6,200
Gross Sales	157,500
Freight—in	2,200
Rent expense, selling space	9,600
Rent expense, office space	1,200
Accrued rent payable	800
Sales Discounts	1,500
Depreciation expense, office equipment	320
Freight out and delivery expense	2,700
Purchases	97,300
Sales returns and allowances	1,300
Merchandise inventory January 1, 1979	15,500
Advertising expense	1,800
Insurance expense	130
Merchandise inventory December 31, 1979	17,900
Purchase discounts	1,100
Store Supplies Expense	850
Purchase returns and allowances	550
Office supplies expense	250
Depreciation expense store equipment	1,550
Common stock dividends	2,500

Required:

Prepare a classified Income Statement.
(**Note:** Two marks for form and up to two marks deducted for extraneous items.)

14 Q. 4. Kemp, Staub and Thompson were partners in Tiger Sports. The partnership agreement provides that each partner shall receive an interest allowance of nine percent of their beginnng capital balances and a salary allowance as follows: Kemp $20,000, Staub $18,000 and Thompson $10,000. Thompson, who manages the stores in the off season, receives a bonus of 20% of the income in excess of $18,000 after partners' interest and salary allowances. The balance is to be divided equally.

The capital balance at the beginning of the year were:

Kemp	$120,000
Staub	110,000
Thompson	170,000

Required:

(7) (a) The journal entry to distribute net income of $144,000.

(7) (b) The journal entry to distribute net loss of $6,000.
(For partial marks show calculations)

26 Q. 5. Meta Ltd. commenced operations on January 2, 1978. Authorized capital was as follows:

200,000 6% $100 par value, redeemable non-participating preferred shares.
1,000,000 $10 par value common shares.

During 1978 and 1979 Meta engaged in the following selected transactions:

1978

Jan. 3 Purchased a building and land for 1,000 preferred shares. Fair market value was $120,000. The city assessed the property on this date on the following values:

Land	$16,000
Building	$80,000

Jan. 15 Accepted subscriptions for 20,000 common shares at $11 per share. Conditions were as follows:

10% down, balance due February 15, 1978.

Feb. 15 Received balance on January 15, 1978 subscriptions.

Nov. 15 Directors declared dividends of $24,000. Payment date was January 15, 1979, record date was December 31, 1978.

Dec. 31 Net income of $100,000 was reported. The books were closed.

Dec. 31 The board passed a resolution earmarking $30,000 of Retained Earnings for plant extension.

1979

Jan. 15 The dividend declared was paid.

Feb. 15 Purchased 2,000 shares of treasury stock on the open market for $14 per share.

June 15 Sold 1400 of the shares acquired February 15, 1979, for $15 per share.

Oct. 15 Accepted subscriptions for 30,000 common shares at $12.50 per share. Conditions were as follows:

20% down, balance due January 15, 1980.

Nov. 15 Directors declared the regular 6% preferred dividend.Payment date was January 15, 1980; record date was December 31, 1979. The directors also declared a 10% stock dividend on the common shares to be distributed January 15, 1980, to shareholders of record December 31, 1979. The common shares were trading on the Vancouver Stock Exchange at $11 per share on the date of declaration.

Dec. 31 Net income of $40,000 was reported. The books were closed. Plant expansion was completed. Cost of the new building was $48,000.

Required:

Prepare journal entries to record the above transactions.
(Explanations not necessary).

14 Q. 6. You have been engaged by Ace Construction Ltd. to help in obtaining a bank loan. Ace has informed you that their accounts, which are on a cash basis, are complete and that all you need do is quickly review their statement for presentation to their bankers. You are presented with the following:

Ace ConstructionLtd.
Cash Received and Spent This Year
September 30,1979

Cash received this year	$250,000
Cash spent this year for wages and supplies	175,000
Cash left over and therefore income	$ 75,000

Upon reviewing this statement you are somewhat apprehensive. You know that certain adjustments must be made to convert this to the accrual basis. Upon further investigation you find that Ace had neglected to consider the following data:

Wages paid to employees October 2 for the five days there ending	$12,500
Deposits received on contracts not yet commenced	62,500
Amount owing from customers for work completed in September 1979	37,500
Depreciation on equipment for year	17,500
Amounts owing suppliers for materials used during September 1979	50,000

Required:

(10) (i) Prepare adjusting journal entries (Omit narratives)
(4) (ii) Prepare a revised income statement for the banker.

Note: Assume that the $175,000 cash spent per the cash statement was $100,000 for materials and $75,000 for wages.

13 Q. 7. Mid-West Investments engaged in the following transactions:

1979

Jan. 1 Purchased as a long-term investment $100,000 of Provincial Resource's 6% 20 year bonds on their interest date. The bonds matured January 1, 1984. Price paid was 98 3/4 plus $250 commission.

Feb. 15 Purchased as a long-term investment 1,000 shares of Far North Mining Limited common stock paying $35 per share plus $1,000 commission.

July 1 Received the semi-annual interest on Provincial Resource bonds.

Dec. 15 Received $1.00 per share dividend on Far North stock.

Dec. 31 Made an adjusting entry for interest accrued on the Provincial Resource bonds.

1980

Jan. 2 Received interest on Provincial Resource bonds for the 6 months ended January 1, 1980.

Apr. 1 Provincial Resource bonds were sold for 98¼ plus three months accrued interest less a commission of $250.

Required:

Journal entries to reflect the above.

100

END OF EXAMINATION

CANADIAN CERTIFIED GENERAL ACCOUNTANTS' ASSOCIATION
ACCOUNTING 101 EXAMINATION
MARCH, 1980
EXAMINER'S COMMENTS

Specific

Q.1 This was surprisingly well handled. Candidates generally were successful on the sources side, but demonstrated a greater weakness in identifying uses.

Q.2 This question was well handled, with the majority of the students receiving full marks. When there was a problem the students failed to set up both the employee and employer payable accounts.

Q.3 Most candidates received full marks or close to full marks on this question. Marks not received were generally due to the inclusion of non-income statement items or failure to display proper form.

Q.4 This question dealing with the distribution of income/loss among the members of a partnership should have been handled better than it was. Many candidates failed to answer both parts of the question. Other common errors were attributing the bonus in (a) to the wrong partner and errors in computations.

Q.5 The greatest difficulty in this question came in the first two entries for the distribution of the stock. The allocation in the first entry was particularly poor, few students correctly identified the asset breakdown. Also poorly handled was the purchase of the building and the return to unappropriate retained earnings of the previously earmarked balance.

Q.6 Well done by the majority of candidates. Marks not received were caused by the use of improper account titles and not completing the second section of the question.

Q.7 This was the poorest handled question of the paper. Candidates had virtually no concept of the amortization of the discount, which most failed to record in setting up the purchase.

CANADIAN CERTIFIED GENERAL ACCOUNTANTS' ASSOCIATION

ACCOUNTING 101 EXAMINATION
MARCH, 1980
SUGGESTED SOLUTIONS

Marks **Time: 3 Hours**

12 Q. 1. **Sources**

1. Current operations. Funds are increased as a result of normal operations if the inflow from sales exceeds the outflow for expenses and goods sold.
2. Long-term Liabilities. Transactions that increase long-term liabilities increase working capital.
3. Sale of Non-current Assets. When a non-current asset is sold for cash or receivables current assets are increased.
4. Sale of Capital Stock. The issuance of stock for cash or receivables increases current assets and therefore is a source of funds.

Uses of Funds

1. Purchase of Non-current Assets. When non-current assets are purchased working capital is reduced and such purchases are a use of funds.
2. Payment of Non-current Liabilities. Payment of Long-term liabilities reduces working capital and is a use of funds.
3. Capital Reductions. The purchase of treasury stock results in a decrease of working capital and is, accordingly, a use of funds.
4. Declaration of a Dividend. The declaration creates a current liability and reduces working capital, thereby constituting a use of funds.

7 Q. 2.

Wages Expense	$2,306	
Unemployment Insurance payable		$ 40
Income taxes payable		280
Canada Pension Plan payable		30
Hospital Insurance payable		40
Wages payable		1,916
Payroll taxes expense	$ 126	
Unemployment Insurance payable		$ 56
Canada Pension Plan payable		30
Hospital Insurance payable		40

14 Q. 3.

Kitchener Hardware Company
Income Statement for Year Ended December 31, 1979.

Revenue				
Gross Sales				$157,500
Less: Sales returns and allowances			$ 1,300	
Sales discounts			1,500	2,800
Net sales				$154,700
Cost of goods sold:				
Merchandise inventory January 1, 1979			$ 15,500	
Purchases		$97,300		
Less: Purchase returns and allowances	$ 550			
Purchase discounts	1,100	1,650		
Net Purchases		$95,650		
Add: Freight in		2,200		
Cost of goods purchased			97,850	
Goods available for sale			$113,350	
Merchandise inventory Dec. 31, 1979			17,900	
Cost of goods sold				95,450
Gross profit from sales				$ 59,250
Operating expenses:				
Selling expenses:				
Sales salaries expense		$16,400		
Rent expense, selling space		9,600		
Advertising expense		1,800		
Freight-out and delivery expense		2,700		
Store supplies expense		850		
Depreciation expense, store equipment		1,550		
Total selling expenses			$32,900	
General and administrative expenses:				
Office salaries expense		$ 6,200		
Rent expense, office space		1,200		
Insurance expense		130		
Office supplies expense		250		
Depreciation expense, office equipment		320		
Total general and administrative expenses			8,100	
Total operating expenses				41,000
Net Income				$18,250

14 Q. 4.

(7)	(a) Income Summary	144,000	
	Kemp		48,000
	Staub		45,100
	Thompson		50,900
(7)	(b) Staub	2,100	
	Thompson	4,700	
	Kemp		800
	Income Summary		6,000

Page 2 of 5

26 Q. 5.

1978			
Jan. 3	Land	20,000	
	Building	100,000	
	Preferred Stock		100,000
	Premium on Preferred Stock		20,000
Jan. 15	Subscriptions Receivable - Common Stock	220,000	
	Common Stock Subscribed		200,000
	Premium on Common Stock		20,000
Jan. 15	Cash	22,000	
	Subscriptions Receivable		22,000
Feb. 15	Cash	198,000	
	Subscriptions Receivable		198,000
Feb. 15	Common Stock Subscribed	200,000	
	Common Stock		200,000
Nov. 15	Retained Earnings	24,000	
	Dividends Payable - Preferred		6,000
	Dividends Payable - Common		18,000
Dec. 15	Income Summary	100,000	
	Retained Earnings		100,000
	Retained Earnings	30,000	
	Appropriation for Plant Extension		30,000

Page 3 of 5

1979			
Jan. 15	Dividends Payable - Preferred	6,000	
	Dividends Payable - Common	18,000	
	Cash		24,000
Feb. 15	Treasury Stock - Common	28,000	
	Cash		28,000
June 15	Cash	21,000	
	Treasury Stock - Common		19,600
	Contributed Capital - Treasury Stock Transaction		1,400
Oct. 15	Subscriptions Receivable - Common	375,000	
	Common Stock Subscribed		300,000
	Premium on Common Stock		75,000
Oct. 15	Cash	75,000	
	Subscriptions Receivable		75,000
Nov. 15	Dividends - Preferred (or Retained Earnings)	6,000	
	Dividends Payable		6,000
Nov. 15	Retained Earnings (or Stock Dividends)	21,340	
	Common Stock Dividend Distributable		19,400
	Premium on Common Stock		1,940
Dec. 31	Income Summary	40,000	
	Retained Earnings		40,000
Dec. 31	Building	48,000	
	Cash		48,000
Dec. 31	Appropriation for Plant Extension	30,000	
	Retained Earnings		30,000

Both entries on November 15, 1979 could be debited to either dividends or retained earnings. If the debit is to dividends then another closing entry is required

	Retained earnings	27,340	
	Dividends Preferred		6,000
	Stock Dividend		21,340

Page 4 of 5

14 Q. 6.

(10)	(i)	Wage Expense	7,500	
		Accrued Wages Payable		7,500
		Revenues	62,500	
		Unearned revenues		62,500
		Accounts Receivable	37,500	
		Revenues		37,500
		Depreciation Expense	17,500	
		Accumulated Depreciation		17,500
		Material	50,000	
		Accounts Payable		50,000

(4) (ii)

Ace Construction Ltd
Income Statement Year Ended September 30, 1979

Revenues		$225,000
Expenses		
Materials	$150,000	
Wages	82,500	
Depreciation	17,500	250,000
Net Loss		$25,000

13 Q. 7.

1979			
Jan. 1	Investment - Provincial Resource	99,000	
	Cash		99,000
Feb. 15	Investments - Far North Mining Ltd.	36,000	
	Cash		36,000
July 1	Cash	3,000	
	Investment - Provincial Resource	100	
	Interest Income		3,100
Dec. 15	Cash	1,000	
	Dividend Income		1,000
Dec. 31	Accrued Interest Receivable	3,000	
	Investment - Provincial Resource	100	
	Interest Income		3,100
1980			
Jan. 2	Cash	3,000	
	Accrued Interest Receivable		3,000
April 1	Accrued Interest Receivable	1,500	
	Investment - Provincial Resource	50	
	Interest Income		1,550
April 1	Cash	99,500	
	Loss on Disposal of Investment	1,250	
	Investments - Provincial Resource		99,250
	Accrued Interest Receivable		1,500

100

END OF SOLUTIONS

CANADIAN CERTIFIED GENERAL ACCOUNTANTS' ASSOCIATION
ACCOUNTING 101 EXAMINATION
JUNE, 1980

Marks **Time: 3 Hours**

12 Q. 1. X, Y and Z are partners sharing losses and gains in a 2:2:1 ratio. X plans to withdraw from the partnership and on the date of his withdrawal the partners' equities in the partnership are X, $20,000, Y, $24,000 and Z, $16,000. Y and Z plan to continue the business and its records under a new partnership contract.

Required:

Give in general journal form the entries for the withdrawal of X under each of the following unrelated assumptions:

(1) (a) X with the consent of Y and Z sells his interest to A, taking from A $4,000 in cash and A's personal note for $20,000.

(1) (b) X withdraws taking $20,000 of partnership cash for his interest.

(2) (c) X withdraws taking $21,500 of partnership cash.

(4) (d) X withdraws taking $12,000 in cash and an automobile carried on the partnership books at $8,000 less $3,000 accumulated depreciation.

(4) (e) X withdraws taking $3,000 cash and a $20,000 note payable of the new partnership.

10 Q. 2. The balances of the bank's statement and the general ledger bank account are reconciled on a bank reconciliation using the following types of adjustment:

1. Additions to the reported general ledger balance.
2. Deductions from the reported general ledger balance.
3. Additions to the reported balance per the bank's statement.
4. Deductions from the reported balance per the bank's statement.
5. Information reported has no effect on the current reconciliation.

The following information relating to Delta Ltd. was made available to the person preparing the bank reconciliation at December 31, 198A;

(a) A customer's cheque has been returned marked N.S.F., Delta Ltd. had no prior knowledge of this.

(b) A cheque for $930 deposited by Delta Ltd. was recorded, in error, by the bookkeeper as $390.

(c) A company deposit dated December 31, 198A does not appear on the bank statement.

(d) Bank charges of $35 are shown on the bank statement.

(e) Cheque #821 for $663.90 issued on December 14, 198A for the purchase of equipment had been entered incorrectly in the Cash Disbursements Journal as $636.90

(f) Delta Ltd. had obtained a loan from the bank which had not been entered in the books of the company.

(g) The account of I. Payslo was written off to the allowance account as uncollectible.

(h) Cheques outstanding on the November reconciliation remain unreturned by the bank.

(i) A note collected by the bank had not been reported previously to Delta Ltd.

(j) The bank had charged delta Ltd., in error, with a $500 cheque which should have been charged to Deltoid Ltd.

Required:

In your examination booklet, write down the letters (a) to (j). Then, using the above numbers 1. to 5., indicate the appropriate adjustment for each of the items (a) to (j) which apply to the December 31 198A balances of Delta Ltd.

15 Q. 3. The owner of the firm you work for approaches you for help regarding the financial statements prepared for the past two years. The owner is not fully satisfied with the previous accountant's work and has asked you to check on the accuracy of the statements prepared. Your examination reveals the following:

(a) An invoice for a $4,000 shipment of goods was received and the purchase recorded on December 27, 1977. The goods were shipped f.o.b. destination, did not arrive until January 3, 1978, and were not included in the December 31, 1977 inventory account.

(b) A three-year $2,400 insurance policy was purchased on June 30, 1977, and the full amount was expensed at the time.

(c) Accrued wages at the end of 1977 and 1978 amounted to $1,000 and $800 respectively. The accountant did not make the necessary year-end adjustments.

(d) On October 1, 1977, the company purchased at par $20,000 of 8% corporate bonds. The bonds were dated October 1, 1977, and paid interest semi-annually. The accountant recorded interest earned when received.

(e) Depreciation was not recorded for both years. The amounts were $1,600 for 1977 and $2,400 for 1978.

Required:

In your examination booklet set up a grid **exactly** as shown below, and in the spaces provided, record the amount of the understatement (U) or overstatement (O) of each of the above. If no effect, indicate by N.E. Treat each item separately, e.g. U $500. The Company's year end is December 31.

	Net Income		Total Assets		Total Liabilities	
	1977	1978	1977	1978	1977	1978
(a)						
(b)						
(c)						
(d)						
(e)						

PAGE 2 OF 4

16 Q. 4. Data pertaining to the Accumatic Company Ltd. are set forth below. Accumatic has an authorized capital of 1 million common shares of $20 par value and functions in a jurisdiction where it is possible to repurchase its own shares.

1976

Jan. 2 — Accepted subscriptions for 600,000 shares of common stock at $24.00 per share. Cash amounting to 25% accompanied the subscription.

March 31 — The balance of the subscriptions was received.

1977

Feb. 15 — Purchased 4000 shares of the company's stock in the open market at $17.00 per share.

June 30 — Sold 2000 shares purchased February 15 at a price of $10 per share.

1978

Sept. 2 — Purchased for retirement 38,000 shares of the company's stock at $22.00 per share.

Sept. 30 — Declared a stock dividend of 2% to shareholders of record October 30 to be distributed November 15. The market value was unchanged from September 2.

Required:

Prepare journal entries in good form to the end of fiscal year December 31, 1978. Narratives unnecessary.

16 Q. 5. On April 1, 1978, the Clark Corporation sold and issued 2,000,000 par value 7½% 10 year bonds dated April 1, 1978, with interest payable each October 1 and April 1. The bonds sold for $2,071,100, a price to yield the buyer a 7% annual return. The corporation has a fiscal year end of December 31 and uses the interest method of amortization.

Required:

(4) (a) Prepare the journal entry for the issue of the bonds.

(8) (b) **In your examination booklet** complete the following table.

(4) (c) Make the necessary year end adjusting entry to record accrued interest on the bonds and to amortize a portion of the premium.

Period	Beginning of period carrying amount	Interest expense to be recorded	Interest to be paid to bondholders	Premium to be Amortized	Unamortized Premium at end of period	End of Period carrying amount
Apr. 1-Sept. 30						
Oct. 1-Mar. 31						

Note: Round figures to nearest dollar.

15 Q. 6. The following transactions relate to the Mallot Lumber Yard Ltd.

1978

Mar. 4	Sold lumber to Powers, $13,260, terms 2/10 n/30.
Apr. 15	Cash of $2,460 was received from Powers and a 60 day 5 per cent note dated April 15 for the balance was accepted.
Apr. 21	Discounted the Powers note at Great Lakes Bank at 6 per cent.
June 20	No notice of protest was received on the Powers note so it was assumed the note was paid. The discount liability was cancelled.
June 20	Accepted a 60 day 6 per cent $5,400 note dated June 19 from R. Gardiner in granting an extension on the due date of his account
July 6	Discounted the Gardiner note at Great Lakes Bank at 6%
Aug. 21	Received notice protesting the Gardiner note from the bank. Paid the bank the maturity value of the note plus an $18 protest fee. Cancelled the discount liability.
Sept. 7	R. Gardiner's cheque was received for the maturity value of his dishonoured note, the protest fee and interest on both for 17 days beyond the maturity.

Required:

Journalize the above information.

16 Q. 7. The Essex Manufacturing Co. Ltd. which uses straight line method of depreciation purchased three pieces of equipment (designated Machine A, Machine B and Machine C) on the first day of business January 1973. Details of the acquisition are as follows:

	Machine A	Machine B	Machine C
Original Cost	$30,000	$30,000	$30,000
Estimated Salvage	None	4,800	1,200
Life Expectancy	5 years	6 years	8 years

During the first week of business 1978 Machine A was sold for $2,000. This encouraged management to re-examine not only the useful life expectancy but also the expected salvage of Machines B and C. Management decided that Machine B had a remaining life of 2 years as of January 2, 1978, and that the salvage expectation was about right. Machine C on the other hand had a remaining life of 5 years and likely there would be no scrap value.

Required:

Prepare the journal entries required during 1978 for:

(4) (a) Sale of Machine A

(8) (b) Adjustments of accumulated depreciation for correction of errors in depreciation on machines B and C.

(4) (c) Depreciation on machines B and C as at December 31, 1978.

100

END OF EXAMINATION

CANADIAN CERTIFIED GENERAL ACCOUNTANTS' ASSOCIATION
ACCOUNTING 101 EXAMINATION
JUNE, 1980
EXAMINER'S COMMENTS

Specific

Q.1 This question was well handled. The biggest problem was the first entry; many wanted to include extraneous data.

Q.2 Students generally had no problem with this question.

Q.3 Results were not that good on this question. Many candidates indicated the effect but failed to qualify as they were instructed to do.

Q.4 This question caused problems. The first was the failure of many students to recognize that a Premium on Common Stock was involved. As a result many issued more stock than should have been issued. Again the Premium arising from the retirement of common stock was missed by most. The stock dividend sequence in this problem was also not well understood by many.

Q.5 The major error in this question was the use of straight line amortization instead of the interest method as requested. Many also had difficulty in the entry issuing the bonds.

Q.6 Candidates continue to have difficulty with this type of question. Many failed to calculate interest in dollars and cents, rounding off their answer to the nearest dollar.

Q.7 Although there were many perfect answers to this question many others had difficulty. The sale of the asset caused a problem for some. Others had difficulty in the correction process.

CANADIAN CERTIFIED GENERAL ACCOUNTANTS' ASSOCIATION
ACCOUNTING 101 EXAMINATION
JUNE, 1980
SUGGESTED SOLUTIONS

Marks | Time: 3 Hours

12 Q. 1.

Marks		Account	Debit	Credit
(1)	(a)	X Capital	20,000	
		A Capital		20,000
(1)	(b)	X Capital	20,000	
		Cash		20,000
(2)	(c)	X Capital	20,000	
		Y Capital	1,000	
		Z Capital	500	
		Cash		21,500
(4)	(d)	X Capital	20,000	
		Accumulated Depreciation-Automobile	3,000	
		Automobile		8,000
		Y Capital		2,000
		Z Capital		1,000
		Cash		12,000
(4)	(e)	X Capital	20,000	
		Y Capital	2,000	
		Z Capital	1,000	
		Cash		3,000
		Notes Payable		20,000

10 Q. 2.

(a) 2

(b) 1

(c) 3

(d) 2

(e) 2

(f) 1

(g) 5

(h) 4

(i) 1

(j) 3

15 Q. 3.

	Net Income		Total Assets		Total Liabilities	
	1977	1978	1977	1978	1977	1978
(a)	U $4,000	O $4,000	N.E.	N.E.	O $4,000	N.E.
(b)	U $2,000	O $ 800	U $2,000	U $1,200	N.E.	N.E.
(c)	O $1,000	U $ 200	N.E.	N.E.	U $1,000	U $ 800
(d)	U $ 400	N.E.	U $ 400	U $ 400	N.E.	N.E.
(e)	O $1,600	O $2,400	O $1,600	O $4,000	N.E.	N.E.

16 Q. 4.

1976			
Jan. 2	Subscriptions Receivable	14,400,000	
	Common Stock Subscribed		12,000,000
	Premium on Common Stock		2,400,000
	Cash	3,600,000	
	Subscriptions Receivable		3,600,000
March 31	Cash	10,800,000	
	Subscriptions Receivable		10,800,000
	Common Stock Subscribed	12,000,000	
	Common Stock		12,000,000
1977			
Feb. 15	Treasury Stock	68,000	
	Cash		68,000
June 30	Cash	20,000	
	Retained Earnings	14,000	
	Treasury Stock		34,000
1978			
Sept. 2	Common Stock	760,000	
	Premium on Common Stock	152,000	
	Cash		836,000
	Contributed Capital from retirement of Common Stock		76,000
Sept. 30	Stock Dividend (or Retained Earnings)	246,400	
	Common Stock Dividend Distributable		224,000
	Premium on Common Stock		22,400
Nov. 15	Common Stock Dividend Distributable	224,000	
	Common Stock		224,000
Dec. 31	Retained Earnings	246,400	
	Stock Dividend		246,400
	(not required if Sept.30 entry was to Retained Earnings)		

Page 2 of 4

16 Q. 5.

			Debit	Credit
(4)	(a)	Cash	2,071,100	
		Premium on Bonds Payable		71,100
		Bonds Payable		2,000,000

(8) (b)

Period	Beginning of period carrying amount	Interest expense to be recorded	Interest to be paid to bondholders	Premium to be Amortized	Unamortized Premium at end of period	End of Period carrying amount
Apr. 1-Sept. 30	2,071,100	72,489	75,000	2,511	68,589	2,068,589
Oct. 1-Mar. 31	2,068,589	72,401	75,000	2,599	65,990	2,065,990

			Debit	Credit
(4)	(c)	Bond Interest Expense	36,200	
		Premium on Bonds Payable	1,300	
		Bond Interest Payable		37,500

15 Q. 6.

Date	Account	Debit	Credit
Mar. 14	Accounts Receivable -Powers	13,260.00	
	Sales		13,260.00
Apr. 15	Cash	2,460.00	
	Notes Receivable	10,800.00	
	Accounts Receivable - Powers		13,260.00
Apr. 21	Cash	10,791.15	
	Interest Expense	8.85	
	Notes Receivable Discounted		10,800.00
	(10,800 x .05 x 63/365) - (10,893.21 x .06 x 57/365) = 93.21 - 102.06 = 8.85		
June 20	Notes Receivable Discounted	10,800.00	
	Notes Receivable		10,800.00
June 20	Notes Receivable	5,400.00	
	Accounts Receivable - R. Gardiner		5,400.00
July 6	Cash	5,414.66	
	Interest Earned		14.66
	Notes Receivable Discounted		5,400.00
	(5,400 x .06 x 63/365) - (5,455.92 x .06 x 46/365) = 55.92 - 41.26 = 14.66		
Aug. 21	Accounts Receivable - R Gardiner	5,473.92	
	Cash		5,473.92
	(5,400 + 18 + 5,400 x .06 x 63/365 = 5,473.92		
Aug. 21	Notes Receivable Discounted	5,400.00	
	Notes Receivable		5,400.00
Sept. 7	Cash	5,489.22	
	Interest Earned		15.30
	Accounts Receivable		5,473.92
	(5,473.92 x .06 x 17/365) = 15.30		

16 Q. 7. **Machine A**

(4)	Cash	2,000	
	Accumulated Depreciation	30,000	
	Equipment (Machine A)		30,000
	Gain on Disposal		2,000
	To record disposal.		
	Machine B		
(4)	Accumulated Depreciation	3,000	
	Correction of Prior Years' Depreciation		3,000
	Correction of prior years' depreciation. Formerly written-off at $4,200 per annum (25200/6). Should have been at 25200/7 or 3600 per annum.		
(2)	Depreciation Expense	3,600	
	Accumulated Depreciation		3,600
	Machine C		
(4)	Accumulated Depreciation	3,000	
	Correction of Prior Years' Depreciation		3,000
	Correction of prior years' depreciation. New life 10 years with a new annual write-off of $3,000 per annum compared with $3600 per annum previously.		
(2)	Depreciation Expense	3,000	
	Accumulated Depreciation		3,000

100

END OF SOLUTIONS

CANADIAN CERTIFIED GENERAL ACCOUNTANTS' ASSOCIATION
ECONOMICS 104 EXAMINATION
JUNE, 1980

Marks | Time: 3 Hours

Note: Answer **two** questions from each part of the examination. **Do not** answer more than a total of **EIGHT** questions.

PART I - Answer **two** questions only.

14 Q. 1. "Monopolists misallocate resources. They use too many of them because competitive pressures don't force them to be efficient!"

Does this statement make economic sense? Explain.

14 Q. 2. "Even if it costs the government $100 million to put unemployed workers to work on urban renewal projects, the true economic cost of hiring these people will be zero!"

Does this statement make economic sense? Explain.

14 Q. 3. "When an excise tax is placed on a perfectly competitive industry consumers always end up paying the entire tax since in long run competitive equilibrium firms earn zero economic profit."

Does this statement make economic sense? Explain.

PART II - Answer **two** questions only.

12 Q. 4. "Good weather will result in a larger crop. The increase in supply will cause the price to fall and therefore demand to increase. This increase in demand will cause price to rise. Therefore, the market price might actually rise above the level that would prevail with poor weather!"

Does this statement make economic sense? Explain.

12 Q. 5. "We farmers find that our incomes go down in years when the harvest is abundant and go up in years of poor harvests."

Does this statement make economic sense? Explain.

12 Q. 6. "Just because a tax takes more money from wealthy persons than from lower income persons does not rule out that it is a regressive tax!"

Does this statement make economic sense? Explain.

PART III - Answer **two** questions only.

12 Q. 7. "Although the Infant Industry argument for tariffs may be valid in principle it isn't likely to be a valid reason to erect tariffs in real world situations."

Do you agree? Explain.

12 Q. 8. "When the Bank of Canada wishes to counteract unemployment it will sell bonds on the open market and use the money to finance new government expenditures."

Do you agree? Explain.

12 Q. 9. "Even though a change in government spending is a more powerful fiscal policy tool dollar for dollar than is a change in taxes, government may prefer to use tax changes as part of their policy to stabilize the economy."

Do you agree? Explain.

PART IV - Answer **two** questions only.

12 Q. 10. "Depreciation of a country's currency is an appropriate policy to correct a Balance of Payments surplus."

Do you agree? Explain.

12 Q. 11. "Even though the dollar value of G.N.P. or G.N.E. for any one year is not an accurate measure of the value of real output in the economy, changes in G.N.P. or G.N.E. over time will accurately show changes in the real value of output over the time period in question."

Do you agree? Explain.

12 Q. 12. "If a technological improvement increases the productivity of a certain type of labour the market wage for this labour should increase."

Do you agree? Explain.

100

END OF EXAMINATION

PAGE 2 OF 2

CANADIAN CERTIFIED GENERAL ACCOUNTANTS' ASSOCIATION
ECONOMICS 104 EXAMINATION
JUNE, 1980
EXAMINER'S COMMENTS

General

The examination results were somewhat poorer than for previous June papers. However, this was not unexpected because it was the first time the examination was given as a first level course, i.e., Economics 104.

Specific

Q.1 Generally, this question was well answered by most candidates, however, many did not explain that a misallocation of resources is inherent in the nature of monopoly and that it has nothing to do directly with the efficient use of resources as such.

Q.2 This question was well answered. The notion of opportunity cost was well understood. Only those candidates that appeared poorly prepared confused money and economic costs.

Q.3 Most candidates that attempted this question did not answer it particularly well. Many merely asserted that consumers always bear the incidence of taxes placed on competitive industries while many more sophisticated answers suggested that this result was because the supply curve for competitive industries is always infinitely elastic (not true) or because the demand curve for the industry is infinitely elastic (could never be true). Even the better answers tended to only note that the incidence of a tax depends on the elasticities of supply and demand with no analysis.

Q.4 Unexpectedly, only about half of the students that selected this question answered it correctly by distinguishing between a change in the quantity demanded and a change in demand. The others either confused the two or merely agreed with the statement and presented no analysis.

Q.5 Although most candidates choosing this question showed some insight into supply and demand analysis, many either did not mention or did not even imply that the elasticity of demand had something to do with farmers' incomes over time. Many students did not note that the question poses a classic example of the "Paradox of Plenty".

Q.6 This question was reasonably well answered by the majority that chose it. However, many students could not reason out how a tax that took more dollars from a high income or wealthy person could at the same time take a smaller proportion of income than from a lower income person. A few students asserted that since terms like 'wealthy' and 'low income' were not defined, the question could not be answered. This is, of course, not so and even if it were, one would have thought that these candidates would have chosen to answer another question.

Q.7 Candidates that selected this question did well, generally. Most reviewed the essentials of the "Infant Industry" argument for tariffs and noted that the assumptions that the industry will become efficient and that tariffs can be removed in the future are seldom if ever met in the real world.

Q.8 This question was poorly written by most students that attempted it. Most asserted that the Bank of Canada would not be concerned with unemployment or that monetary policy is only used to counteract inflation. Many failed to distinguish between monetary policy conducted by the Bank of Canada and fiscal policy conducted by the federal government. A significant number did not even note that open market sales would, in fact, decrease the supply of money and therefore increase unemployment.

Q.9 This question was moderately well answered. Most students did not discuss why a change in taxes might be preferred to a change in government spending as a fiscal measure except in the simplest setting, e.g., political considerations were seldom mentioned.

Q.10 Strangely enough, this question was answered correctly by only about one half of those that attempted it even though it is straight forward and should be simple for anyone that has even the most basic understanding of the balance of payments and foreign exchange markets. Many candidates merely agreed with the statement in the question which is clearly the opposite of what it should be, e.g., depreciation will make a surplus worse, while appreciation will reduce it.

Q.11 This question was reasonably well answered by most of the candidates that selected it. A significant number however, failed to note that national income data do not accurately measure the total productive activity in any one year period because only those activities that pass through market transactions are counted in G.N.P. or G.N.E.

Q.12 Most students that chose this question gave a reasonable but somewhat incomplete answer. A large number failed to relate the demand for labour to the marginal product of labour or to relate technological change to labour's marginal physical product.

Some candidates argued that any increase in labour's productivity would only reduce the amount of labour required and thereby reduce the demand for labour and market wages. While this approach has some merit most students that chose it did not follow through to the logical conclusion that the question suggests, i.e., a certain type of labour experiences an increase in demand because of an increase in its productivity.

Conclusion

Many students do not follow the instructions provided on the examination booklets, namely not double spacing and not using a new page for each question. Furthermore, many candidates just do not set out their answers in the most favorable light. For example, many elected to write in very light pencil which is extremely hard to read and also strangely enough many students did not number their answers. Both of these make it very difficult to mark a student's answers. Students should be reminded of the examination rules and informed as to how one should answer essay examination questions.

CANADIAN CERTIFIED GENERAL ACCOUNTANTS' ASSOCIATION
ECONOMICS 104 EXAMINATION
JUNE, 1980
SUGGESTED SOLUTIONS

Marks | | | Time: 3 Hours

14 Q. 1. Monopolists misallocate resources because they produce **too little** output. They fear spoiling the market. They set output where price is greater than marginal cost which means society's welfare could be increased by the production of more of the commodity in question. Monopolists have every incentive to combine resources efficiently because it will enhance their profits. The misallocation will occur even if the maximum efficiency of combining resources is attained. They are different considerations.

14 Q. 2. True economic costs are alternatives or opportunities foregone. Therefore, it is correct to state that if previously unemployed workers are put to work the real economic cost of the project is zero regardless of the dollar cost since no alternative output is foregone, i.e. the workers wouldn't have produced anything since they were unemployed.

14 Q. 3. It is true that all economic profits will be competed away in long run competitive equilibrium however it doesn't follow that the incidence of excise taxes placed on perfectly competitive industries would always fall on consumers. The final resting place of an excise tax will be determined by the elasticity of the long run industry supply curve and the demand curve for the product. Generally the more inelastic (elastic) is the demand (supply) curve the more of the tax that will be shifted forward to consumers.

12 Q. 4. The statement is incorrect because it confuses a change in the quantity demanded resulting from a change in price with a change in demand. The abundant crop will cause price to fall and the quantity demanded to consequently increase, e.g. a movement down an unshifted demand curve. Since the demand curve does not shift the price will remain at its new lower level.

12 Q. 5. The statement makes sense as long as the demand curve for agricultural products is inelastic over the relevant range. If it is then price and total revenue will move in the same direction. In years of abundant harvests supply increases, price goes down and so does the total income of farmers. Just the reverse would occur in years of poor harvests.

12 Q. 6. The statement is essentially correct. A regressive tax is one that takes a larger proportion of income as income falls. Therefore, just because low income persons pay less in terms of absolute tax dollars than do wealthy people it doesn't rule out them paying a larger percentage of their incomes.

12 Q. 7. This is correct because two of the crucial implicit assumptions in the Infant Industry argument are seldom fulfilled in the real world. First, the protected industry usually never becomes efficient enough to compete in world markets which is required if the country's true comparative advantage is to guide resource allocation. Secondly, once the tariff is established it is almost impossible to get it removed because strong vested interests will have been created to oppose such a removal.

12 Q. 8. The Bank of Canada conducts only monetary policy. Funding government expenditures is fiscal policy which is conducted by the Ministry of Finance. The appropriate monetary policy to counteract unemployment would be to expand the money supply which would require the Bank to buy government bonds on the open market to increase Chartered bank reserves and not to sell bonds.

12 Q. 9. This is true because even though the multiplier associated with tax changes is smaller than that appropriate to changes in government spending, the former fiscal measure works faster and has a predictable impact while the latter is slower to take effect and may not be as flexible. For example, to counteract inflation government expenditures should be reduced but it may be inefficient to stop some government projects, e.g. what good is one half a bridge or an unfinished hospital?

12 Q. 10. The statement is inaccurate because the depreciation of a country's currency is an appropriate policy to correct a deficit and not a surplus in its balance of payments. Depreciation generally makes imports more expensive in domestic currency and exports cheaper in foreign currency. Therefore, the value of imports will decrease and the value of exports will tend to increase correcting the deficit. Such an effect would make a surplus worse.

12 Q. 11. The statement is only partially correct. The G.N.E. or G.N.P. figure for any one period understates the true value of real output because only productive activity that passes through market transactions are counted. Over time, changes in G.N.E. and G.N.P. won't accurately indicate changes in the real value of output because of possible changes in the proportion of non-market activities and also because of changes in the price level over time, i.e. inflation.

12 Q. 12. The statement is correct. In terms of the derived demand for labour, increased productivity implies that the marginal physical product of labour increases so the demand for labour increases having the general effect of increasing the equilibrium wage rate as long as the supply curve of labour isn't horizontal.

100

END OF SOLUTIONS

CANADIAN CERTIFIED GENERAL ACCOUNTANTS' ASSOCIATION

LAW 108 EXAMINATION

JANUARY, 1980

Marks | Time: 3 hours

Instructions:

(a) On the inside cover of your examination booklet, write down the following: (1) the year in which the material you based your study on was printed, and (2) the province (either B.C. or Ontario) for whose law you are responsible

(b) Candidates may take only copies of the prescribed statutes into the examination room. The only markings permitted on these statutes are underlinings or other emphasis and cross-references to later amendments.

(c) Reasons must be given for all answers. Where statutes are applicable, give the name of the act (which may be abbreviated), any relevant section numbers, and the substance of the relevant statutory provisions. Note: Statutes are not relevant in all questions.

(d) If the facts in a problem question appear incomplete, candidates should indicate what additional facts are necessary and/or any reasonable assumptions to reach a definite conclusion.

18 Q. 1. Margaret is a farmer. She made a contract to sell 150 tons of her crop of wheat to Barry. She and Barry estimated that she could expect to produce 200 tons on her land. Due to an extremely dry summer the total crop was only 100 tons. Consider the following questions:

(6) (a) Does Margaret have to sell the 100 tons, that she has produced, to Barry if he wants it?

(6) (b) Does Barry have to buy the 100 tons if he does not want it?

(6) (c) Is Margaret liable to Barry for the shortage that will inevitably result?

Give full reasons in each question for your answer.

12 Q. 2. Gail agreed to sell lumber to Maureen. Gail promised to deliver the lumber in one lot of 10,000 board feet, and Maureen promised to pay her by certified cheque. In pursuance of this contract, Gail shipped the lumber by rail to Maureen. Consider the following **separate** situations:

(6) (a) Before the lumber reaches Maureen, Gail hears that Maureen has become insolvent. What can Gail do?

(6) (b) After the lumber has reached Maureen, she becomes insolvent. What can Gail do?

9 Q. 3. Stan sold a truck, under a conditional sales agreement, to Valerie to be used in her business. The agreement was properly registered. The price was $10,000. Valerie accepted delivery of the truck and used it in her business. After some months the truck needed repairs. Valerie took the truck to Kevin for servicing. Kevin's bill came to $1,000. This was more than Valerie could afford. She, therefore, phoned Stan to say that she could not pay him any more and that the truck was with Kevin. At this time Valerie had paid off $5,000 of the purchase price.

Required:
What are the rights of each of these parties to the truck?

7 Q. 4. Explain the **purpose** behind the amendments to the Bills of Exchange Act that deal specifically with consumer purchases. (ss. 188-192).

18 Q. 5. Explain briefly,

(9) (a) the reason for the distinction, in the legislation of Canada and the various provinces, between corporations that owe a greater duty of disclosure and those that owe a lesser duty, and some of the consequences of owing the greater duty; and

(9). (b) the factors that determine into which category any particular company will fall.

9 Q. 6. What is meant by the phrase "derivative action" i.e. the right of a minority of shareholders to bring an action in the company's name? Explain briefly why such a remedy should be available and when it is likely to be used.

Do any THREE of the following FOUR questions.
(**Note:** The examiner will read **only** the **first three** of the following questions that are answered. If you do more than the required number of questions, you will receive no credit for the extra question.)

9 Q. 7. Discuss one or more features of the law of insurance that go to support the proposition that a contract of insurance is not a wagering or gambling contract.

9 Q. 8. Explain in your own words the following terms:

(3) (a) Quantum Meruit

(3) (b) Liquidated Damages

(3) (c) Pledge

9 Q. 9. Harry was dismissed from his job with Fairstone Engineering Ltd. He applied for and was given unemployment insurance. Three months later Harry got another job and, at the same time, successfully claimed damages, equal to his wages for three months, for wrongful dismissal from Fairstone. Is there any basis for a claim by the Canada Employment and Immigration Commission to part of what Harry has collected from Fairstone?

9 Q. 10. Penelope saw an advertisement in the paper offering a second hand Ford for $2,000. Penelope asked her friend Anne to buy the car on her behalf, but not to spend more than $1,500. Anne telephoned the number listed and spoke to the owner of the car, Tom. Anne and Tom met and Anne agreed to buy the car for Penelope for $1,500. Tom, however, gave Anne $100 for herself, as he said, "in consideration of the business she brought him". Penelope duly paid Tom the price and then found out what had happened. What are Penelope's rights now?

100

END OF EXAMINATION

CANADIAN CERTIFIED GENERAL ACCOUNTANTS' ASSOCIATION
LAW 108 EXAMINATION
JANUARY 1980
EXAMINER'S COMMENTS

General

The exam was generally well done. The common criticisms of the past few years did not generally apply. Reasons were usually given and students generally resisted the temptation to find answers in the statutes alone..

Specific

Q.1 This question was not well done. The most common problem was caused by the fact that common sense came into conflict with 'the law,' and the resulting difficulties caused considerable confusion. Students were, in general, much happier with the statute than with the common law.

Q.2 This question was fairly well done. The most common causes of difficulty were the belief on the part of some students that particular significance is attached to the certified cheque and the failure to realize that the two situations presented the seller with quite different problems. Those students who did well had a clear view of the commercial problems facing the seller.

Q.3 This question was generally well done. The most common errors were the use of the *Sale of Goods Act* and the belief that Valerie (the buyer) had no further rights in the truck.

Q.4 This question was not well done. Students still find it hard to answer questions that require a consideration of the *purpose* of rules of law.

Q.5 This was not as well done as might have been expected. Many students assumed that simply by stating that the distinction referred to was that between public and private corporations the question had been answered. Many students were quite exhaustive in discussing the consequences for the 'public' company. Many students quoted from statutory definitions of 'public' companies but did not understand what was being said so as to make use of the statutory definition to answer the first part of the question.

Q.6 It was not sufficient in answering the question to quote the appropriate section of the act. Students had to show *how* the derivative action could be used. The question was nearly always competently done but seldom well done.

Q.7 This question was surprisingly well done.

Q.8 This question was either very well done or very badly done. Students either knew what each word or phrase referred to or had no idea at all and made wild and inaccurate guesses.

Q.9 This question was also well done.

Q.10 This question was usually competently done. The most common mistake was a failure to specify the basis of Penelope's remedy and to indicate that it would also be available against Tom.

CANADIAN CERTIFIED GENERAL ACCOUNTANTS' ASSOCIATION

LAW 108 EXAMINATION

JANUARY, 1980

SUGGESTED SOLUTIONS

Marks

Time: 3 hours

18 Q. 1.

(6) (a) The issue here is whether the failure of the farm to grow at least the contract amount is frustration of the contract. The lesson notes refer to the case of **Howell v. Coupland** where a farmer was excused from fulfilling his obligation (at least insofar as his crop fell short of the amount that he had contracted to sell). The answer to this part is unclear, and will depend on the court's view of what happened.

(6) (b) The buyer under the Sale of Goods Act does not have to buy less than the contract amount. (Ont. s. 29(1); B.C. s. 35(1)).

(6) (c) This part has been, in part, answered by what was said in response to part (a). Here **Howell v. Coupland** is directly relevant. Margaret is, therefore, excused under the doctrine of impossibility of performance.

Note: The Frustrated Contracts Act set out in the B.C. lesson notes is irrelevant to this question.

12 Q.2.

(6) (a) The Sale of Goods Act (B.C. ss. 47-50; Ont. ss. 42-45) allows a seller to stop the goods in transit when the buyer has become insolvent. Gail can therefore prevent delivery to Maureen.

(6) (b) Once the lumber has reached Maureen, Gail can only sue Maureen for the price. Since Maureen is insolvent, Gail can only claim as one of her creditors.

9 Q. 3. The service station has a lien (not, strictly speaking, a Mechanics' Lien: that arises in connection with land). This is a possessory lien, that is good (subject possibly to contradictory judgments in B.C.) against even the registered owner under a conditional sale. After Kevin has been paid, Stan can recover his money out of the truck. Any balance belongs to Margaret. Since only half has been paid, there are no restrictions on the remedy that Stan might have.

7 Q. 4. The purpose of these sections is to protect consumers from the consequences of being sued by a holder in due course under a promissory note, by making any subsequent holder of a consumer note a holder with no more rights than the original party.

18 Q. 5.

(9) (a) The distinction between "reporting" and "non-reporting" or between companies that do and those that do not offer their shares to the public is to ensure that the former class observes more stringent rules regarding the disclosure of information about the corporation as a condition of having wide access to investment capital through public offerings of shares. The principal methods of ensuring such disclosure are the requirement that detailed financial statement be published and the prospectus which must be approved by the applicable body (Ontario Securities Commission or B.C. Superintendent).

(9) (b) A company owes the greater duty to disclose if it has issued a prospectus and if any of its shares are traded on any stock exchange. There are provisions for a company that would otherwise have the greater duty to be exempted from that either by the B.C. Superintendent or the Ontario Securities Commission.

9 Q. 6. The phrase "derivative action" refers to the action brought in the company's name by the minority shareholders, without the consent of the majority shareholders, to prevent some act that may be extremely prejudicial to the minority or the company. A number of conditions have to be satisfied before the action can be maintained. These are now set out in the legislation (Companies Act s. 222, B.C.A. s. 99 (and other sections)).

9 Q. 7. The principle of indemnity, the requirement of insurable interest and the insurer's right to subrogation all illustrate the limitation on insurance recovery that prevents insurance for being a wagering contract. The operation of these principles or rules results in insurance only being available where the insured has suffered a loss. A gambling contract creates a risk of loss. An insurance contract shifts a risk of loss from the insured to the insurer.

9 Q. 8.

(3) (a) Quantum Meruit — as much as it is worth. A claim that is much like a contract claim that allows one party to claim for the benefits conferred on the other where the contract has been breached by the latter or is otherwise unenforceable.

(3) (b) Liquidated Damages are to be distinguished from a penalty. Both are amounts of money specified in a contract as payable on breach. The latter is unrecoverable; the former can be recovered instead of damages.

(3) (c) Pledge or pawn is the taking of security by the transfer of possession only.

9 Q. 9. The Canada Employment and Immigration Commission, like any insurer, is subrogated to the claims of the insured when it has paid the insured. This is specifically spelled out in ss. 51-52 of the Act.

9 Q. 10. An agent (Anne) owes her principal (Penelope) a fiduciary duty. An agent cannot take a bribe. The principal can (a) recover the amount of the bribe from the agent **and** (b) sue the third party (Tom) who paid the bribe to recover the same amount from him.

100

END OF SOLUTIONS

CANADIAN CERTIFIED GENERAL ACCOUNTANTS' ASSOCIATION
LAW 108 EXAMINATION
MARCH, 1980

Marks

Time: 3 Hours

Instructions:

(a) Reasons must be given for all answers. It is not necessary to quote relevant section numbers, if statutes are applicable. An understanding of the substance of the statutory provisions is of primary importance.

(b) If the facts in a question appear incomplete, candidates should indicate that additional facts are required and/or clearly state any reasonable assumptions made to reach a definite conclusion.

12 Q. 1 What are the functions of legislation in the Canadian legal system?

12 Q. 2 Father wrote a letter to Son as follows, "I have heard that you are just beginning your training in accountancy. I know that you will have to work hard and so on; to make things easier for you, I shall let you live rent-free in an apartment in a building I own. All I want from you is your assurance that you will work hard." Son accepts and moves into the apartment. One year later Son takes out a girl of whom Father does not approve and Father orders Son to leave the apartment.

Has Son any claim against Father, and, if so, for what? Give reasons for your answer.

9 Q. 3 The company for which you work has been offered a share in an invention, on the condition that the company would pay the inventor $25,000.00 if the invention is successful. It is by no means clear that the invention will be successful and some testing will be required.

Explain briefly the factors that are important in any decision to include in the agreement between your company and the inventor, each of the following clauses:

a) A promise by the inventor that the invention will be successful,
b) A clause making the success of the invention a condition of the contract.

9 Q. 4 Margaret agreed to sell her car to David. The car would not go, and David wanted it for parts. They agreed to a price of $250.00 and that the deal would be completed on December 1. Nothing was said in the contract about delivery. On Dec. 1 David phoned Margaret to say that when she brought the car to his house he would pay her. She replied that he could come and get it and pay her then.

Who was right, and when must David pay for the car? What other consequences might follow from this dispute?

9 Q. 5 What methods are used to ensure that the principle of indemnity is followed when a claim is made by an insured under a policy of insurance?

9 Q. 6 What restrictions are imposed on the right to repossess consumer goods that are the subject of a security interest?

9 Q. 7 Gail is a real estate agent. She is employed by Bill to sell his home for him. Unknown to him she arranges for her brother Dave to buy Bill's house at the price he was asking. Bill paid Gail $6,000 as her commission on the sale. Bill has now found out about Dave's purchase. What remedies does Bill have? (Consider the position apart from any legislation governing real estate agents of which you might be aware.)

10 Q. 8 The company for which you work has been invited to supply a considerable amount of inventory for a new corporation about to be incorporated. What concern should you have in this situation?

9 Q. 9 What methods are available to a Stock Exchange to control undesirable speculation in shares traded on the exchange?

12 Q. 10 What problems exist in any attempt to ensure that the auditor of a widely-held corporation fulfills his function properly?

100

END OF EXAMINATION

CANADIAN CERTIFIED GENERAL ACCOUNTANTS' ASSOCIATION
LAW 108 EXAMINATION
MARCH, 1980
EXAMINER'S COMMENTS

General

A significant number of students still persist in their refusal to read the instructions. These students do not realize that a paper that is neat, where the writing is double-spaced and where the examiner is guided to the places where the complete answer may be found creates a favourable impression that cannot do any harm. A paper that is nearly illegible because the writing has not been double-spaced creates immediately a bad impression that cannot do any good.

The general standard of performance was good. Many students had a good grasp of the issues and did a creditable job of analysis and of providing answers.

A significant number of students displayed extremely poor examination technique. Students must realize that a brief, concise and precisely answered question is the goal. Students must learn to take time to read the question, determine what is required of them and answer the question only after these steps have been taken.

Specific

Q.1 This question was generally well done. It was, of course, possible to do no more than repeat what was in the lesson notes. Common errors were the offering of an outline of the Canadian court structure or consumer law as examples.

Q.2 While the question was often well done there were some problems. First, the issue was whether there was any enforceable contract. Students who spent time worrying whether the fact that the son was taking out a girl was or was not compliance with the contract missed the point and got no marks for the discussion. Second, the question was designed to offer either consideration or reliance as a basis for enforcement and both should have been discussed.

Third, students continue to get badly confused by what they term 'conditional contracts'. The 'contract' in the case was termed a 'conditional contract' and then it was often said that there could be no such contract or that the son's working hard was a 'condition of the contract'. Such an answer missed the point of the question. Any contract may be conditional in the sense that the happening of an event may discharge one or both parties from further performance. Such an event might of course, occur here. The point is not whether such an event did occur (and it would be unlikely to have done so) but whether there was any enforceable contract in the first place, and an assurance (i.e., a promise) to work hard might be consideration.

Q.3 This question caused many problems for the students. It was based on a discussion in the notes on the usefullness of conditions, i.e., express clauses providing that the happening of a certain event might excuse one or both parties from further (or any) performance. It had been expected that more students would have remembered that. Enough students did get the answer correct to justify the question. Once again the mysterious term 'conditional contract' cropped up and misled some students into saying that there could be such a contract. A large number of students thought that there might be the possibility of a remedy based on misrepresentation or fraud. Such remedies are not possible. A promise to do something is either performed or it is not. In the event that it is not performed, the promisee may have a remedy for breach of contract. The unwisdom of the contract does not indicate fraud or misrepresentation. There was no statement inducing the making of the contract.

Q.4 This question was well done by nearly every student. The most common inadequacy in the answer was the failure to state that Margaret can sue for the price and that property had passed to David.

Q.5 There were 2 parts to the answer; (1) the insured must have an 'insurable interest', and (2) the insured can only recover the amount of his or her loss. On a large number of papers students set out only one of the two parts. However, often the elaboration on the one point was so full that a passing grade was given.

A significant number of students responded to the question by putting down everything that they knew about insurance. This indicates to the examiner that the material has not been well understood.

Q.6 This question was generally well done. A significant number of the students did not mention both requirements. Evidence of a clear understanding of the issues on either point was, however, sufficient for a passing grade.

Q.7 This question was generally well done. Most students recognized the issues and provided an adequate answer.

Q.8 The majority of the students obtained a passing grade on the question. Those who failed completely misunderstood the question and talked about everything from directors' duties to the problem of insider trading, and the advantages of incorporation. Those who recognized that the problem concerned the liability of a corporation for a pre-incorporation contract obtained a passing grade. Partial credit was given for a suggestion that security under the P.P.S.A. might be taken, even though this would be a commercially unreasonable response if the inventory was to be sold or used in a manufacturing process.

Q.9 There was an extraordinary range of answers to this question. Those who did poorly did not understand the question, the way in which speculation could be controlled or even the terms that the answer required. For example, where mention was made of devices like the prohibition of 'short selling' was or how it permitted speculation. The same ocurred when control in margin requirements was mentioned. A majority of the students, however, had obviously understood the notes and had a fairly good grasp of the issues.

Q.10 Most students realized the inherent conflict that faces the auditor: paid and chosen by management but responsible to the shareholders. There was a tendency in many students to list the duties of the auditor. This was not an adequate answer. A passing grade was given when the conflict was recognized.

CANADIAN CERTIFIED GENERAL ACCOUNTANTS' ASSOCIATION
LAW 108 EXAMINATION
MARCH, 1980
SUGGESTED SOLUTIONS

Marks **Time: 3 Hours**

12 Q. 1 There are four functions of legislation.

1. To change the rules of the common law when the courts are either unwilling or unable to do so.

2. The creation of new legal concepts and institutions, e.g., the business corporation and the granting of the judicial remedy of divorce.

3. The creation of various administrative boards, commissions and tribunals that supplement or even replace the traditional legislative and judicial functions of parliament and the courts.

4. The running of the country: the raising of money by taxes and the spending of it, the conduct of foreign affairs, the control of immigration, employment, etc.

12 Q. 2 This is a promise to make a gift. However, it is more than a simple promise to make a payment without the exchange of economic equivalents. The father's promise will induce reliance by the son. He may have given up a job or moved into the apartment. This may make the promise enforceable. The request by the father that the son work hard and, as we may assume, his assent to it, may even be sufficient consideration to justify the enforcement of the father's promise. The amount of Son's claim might be for either the cost of equivalent accommodation for as long as is reasonably required to complete the course or specific performance of the contract so that the son can live in the apartment for the same length of time.

9 Q. 3 (a) The promise is only as good as the inventor's wealth. If the invention is a failure, a remedy for breach of contract, while giving a possible remedy in damages, may be illusory if the inventor has no money. In any case, the inventor may be unwilling to make such a promise.

(b) The effect of a condition is that, if it is not fulfilled, i.e., if the invention is a failure, the company will be discharged from any further performance.

(Lesson Notes pp. 3:8 - 3:9)

9 Q. 4 The seller has a duty to "deliver" the goods. This means, however, that he has only to make the goods available to the buyer. S.G.A. Ont. s. 28(1); B.C. s. 34(I). The buyer is bound to pay for them when he takes delivery (Ont. s. 27; B.C. s. 33). This means that Margaret is right about delivery. If David refuses to pick up the car, he may be sued by Margaret for the price since property has passed to David (Ont. ss. 19, Rule I, 47(1); B.C. ss. 24, Rule 1, 53(1)).

9 Q. 5 The courts require that,

1. The insured has a "insurable interest" in the property.

2. The insured can, in any case, only recover the amount of his loss.

9 Q. 6 The legislation of most provinces provide that the consumer debtor can either force a sale of the goods reproduced (e.g. if more than 60% of the purchase price has been paid -- P.P.S.A.) and where about 2/3 has been paid, the secured party cannot repossess without leave of the court.

9 Q. 7 Gail has breached the fiduciary obligation that she, as Bill's agent, owed to him. Bill can set the contract aside and get back the property from Dave or he can recover any profit that Dave or Gail might have made by virtue of his ownership of the property. Gail is not entitled to any commission for the work that she did on Bill's behalf.

10 Q. 8 This would be a pre-incorporation contract. The CBCA (s. 14) provides that the person who enters this contract on behalf of the corporation may be personally bound, so some concern may be expressed for this person's solvency. This is, however, subject to the express agreement of your company not to hold this person liable. Your company could apply to the court for an order determining how the obligation of the corporation and the person who made the contract should be apportioned and the order so made may give a right against the corporation.

9 Q. 9 The methods are:

1. Control of the margin requirement.
2. Prohibition of short selling.
3. Halt in trading.

12 Q. 10 The auditor's function is to report to the shareholders on the adequacy and accuracy of the financial statements prepared by the corporation. The problems arise in four areas:

1. The need for the auditor to be independent of management.
2. His access to the financial records of the corporation.
3. His accountability to shareholders.
4. The adequacy of the information he transmits to the shareholders.

100

END OF SOLUTIONS

CANADIAN CERTIFIED GENERAL ACCOUNTANTS' ASSOCIATION

LAW 108 EXAMINATION
JUNE, 1980

Marks

Time: 3 Hours

Instructions:

(a) Reasons must be given for all answers. It is not necessary to quote relevant section numbers, if statutes are applicable. An understanding of the substance of the statutory provisions is of primary importance.

(b) If the facts in a question appear incomplete, candidates should indicate that additional facts are required and/or clearly state any reasonable assumptions made to reach a definite conclusion.

9 Q. 1 What are the principal reasons for the creation of administrative boards like the Workmen's (Worker's) Compensation Boards, C.R.T.C., and Labour Relations Boards, and what advantages can be obtained by the setting up of such boards?

12 Q. 2 Sarah, a famous singer, agreed to sing for the opera society during its 1979 season in Winnipeg and she agreed not to sing for any other person during the season and not to sing in Winnipeg for two months before the season opened on September 15, 1979. On September 1, 1979, the director of the opera heard that Sarah had sung in Winnipeg at a concert given the previous evening and that she was planning to be in Mexico during the season so that she would be unable to perform her obligation to sing.

What remedies might the opera society have against Sarah? Consider the case as of September 1, 1979.

12 Q. 3 Barry is a painter who agrees to paint Daphne's house for $2,000, payment to be made on completion. After painting 2/3 of the house, Barry becomes seriously ill and cannot complete. He sues Daphne for $1,300 but she refuses to pay, saying that she is only liable to pay on completion.

What decision do you think a court would reach in this case? Give full reasons.

9 Q. 4 On April 26th Frank agreed to buy a new car from Universe Motors Inc. The car was one of those that were on the lot ready for sale. He arranged for a radio and tape-deck to be installed before the car was to be delivered to him. Frank paid the full price of $8,000 at the time that he ordered the car. On Thursday, May 1st the work was done. That night the premises of Universe Motors Inc. were burnt to the ground and the car was destroyed. Frank wants to know if he can get his money back from Universe Motors Inc.

Can he do so? Give full reasons for your answer.

12 Q. 5 Imagine that you are the manager of a small manufacturing company in a highly competitive area and that you have just hired a sales manager. You are concerned that she may quit her job with you and work for your competitor.

What legal problems will you face in trying to minimize the harm that might arise in the event that she quits her job?

9 Q. 6 What are the principal features of a negotiable instrument? Explain why these features are important and why they were developed.

12 Q. 7 In 1975 Helen and Anne were recent C.G.A. graduates. They decided to rent office space together and to share the costs of a secretary and office equipment. The arrangement was successful and their respective practices grew at a satisfactory rate. Helen found that she was a very successful developer of new business and Anne found her strength in actually running the office and doing the work for their clients. They developed an informal practice of splitting the profits that were earned by the business brought in by Helen. Helen got 40% and Anne 60% after the overheads were met. The arrangement worked until Anne married in 1979. She and her husband have arranged a trip around the world for themselves that will take about a year to complete.

Does Anne run any risks in simply closing up her practice and vacating the office that she and Helen had shared? If she does, how can she avoid them? You may assume that Helen has no objections and that there is nothing in the lease of the office that would preclude Anne from leaving.

13 Q. 8 Compare and contrast widely-held and closely-held corporations.

12 Q. 9 What are the principal features of the rules governing insider trading?

100

END OF EXAMINATION

CANADIAN CERTIFIED GENERAL ACCOUNTANTS' ASSOCIATION
LAW 108 EXAMINATION
JUNE, 1980
EXAMINER'S COMMENTS

General

The exam was, in general, poorly done. The difficulties faced by many students were largely of their own making. These students persisted in assuming that the questions were more difficult than they were. They imagined all kinds of facts that were not part of the problems. They failed to consider that the questions were set on the basis of the Lesson Notes, and that what was required was some reference to what had been said in the notes.

Underlying many of the poorer papers was an almost complete absence of any idea of what solutions might be commercially or practically reasonable. This will be referred to in connection with the individual questions later, but, as a general point, many students have no understanding of the very close relationship between commercial practice and law.

The one consistent practice of a great many students is their determination to write the exam in ignorance of the instructions. A failure to follow the instructions whether it lies in a refusal to answer the question asked by the examiner or in a refusal to present the exam as required (e.g., double-spaced, etc.) can only prejudice the student directly or indirectly.

Specific

Q.1 This question was very poorly done. It had been assumed by the examiner that students would realize that the context for the question was the discussion on the use of boards in Lesson 1. Students who discussed the method of operation of the W.C.B. were not dealing with the question in the way that was required and were given a failing grade. It was quite surprising to find statements suggesting that the purpose of the CRTC is the improvement of employer-employee relations, or that the Labour Relations Board administers the Employment Standards Act.

Q.2 This question was surprisingly poorly done. The vast majority of students either said that the contract was in restraint of trade, that the opera society could obtain an order for specific performance, that the society had to wait until she should fail to show up before they could do anything or that the case was governed by the Sale of Goods Act. Any one of these statements indicated quite clearly that the student had not read the notes and had no idea of what solution would make practical sense, and resulted in a failing grade.

The first statement was nonsense because any employer can prevent an employee from working for anyone else *during the time that the employee is working for him.* The second statement is wrong and there is a discussion of this precise point in the Lesson Notes. The most an employer can get is an injunction to prevent the employee singing in Mexico. The third statement shows that the commercial or practical context has been completely ignored. It is simply quite impossible for the society to wait until the season starts to know whether the star performer will show up or not. The society must be able to take steps to find an alternative peformer if there is any doubt about Sarah's reliability. The fourth statement is one that shows that the students have no idea of the law of contracts or the scope of the Sale of Goods Act. To call an employment contract a sale of *goods* is absurd.

Q.3 Once again it was suprising how few students realized that the need to prevent Daphne's unjust enrichment justifies Barry's remedy. Many students talked about the illness being unforeseeable. This is completely irrelevant. The answer would be the same if Barry had deliberately breached the contract because he got a better offer somewhere else. The majority of students realized that Barry had to have a remedy but few put it on the correct basis.

Q.4 Thes question was generally well done.

Q.5 A very large number of students said that any contract in restraint of trade was unenforceable. This is wrong. Such a contract, as the Lesson Notes state, is enforceable if it is reasonable. Very few students offered both methods for restricting the harm.

Q.6 It was inadequate to list only the requirements of a negotiable instrument - e.g., date, signing, etc. The answer required the students to show that the peculiar features of a *negotiable* instrument be discussed. A surprising number of students failed to do this and, as a result, got no more than a failing grade.

Q.7 This question was very poorly done. The poor answers fell into two categories. The first contained suggestions that Anne should not take her trip or should hire a replacement for herself. These are simply not responses that meet the issue raised by the question. The second contained suggestions that the parties should *now* have a formal partnership agreement. This, again, is not a sensible suggestion. It is hard to see how anything would be changed by such a step. Anne's problems arise from creditors or potential creditors, not from Helen. Very few students (less than 5%) spent any time exploring the issue whether there was a partnership and why. Students who said, "I assume that there is a partnership", were penalized. Such an assumption must not be made. The question required an investigation of the relationship to determine its nature. Such an investigation cannot be bypassed by an assumption. Some students even assumed that there was a formal agreement between Helen and Anne. Suggestions that the risks Anne was running consisted of a loss of income were irrelevant. Answers that discussed the point of the question often suggested that the partnership assets be liquidated and the business wound up. This is a silly suggestion. There is no reason for it and no suggestion in the question that Anne requires the return of any investment she may have made.

Q.8 This was generally well done, though, again, quite a surprising number of students had little or no idea of the distinction. To obtain more that a bare passing grade it was necessary to do more than list the characteristics of each kind of corporation.

Q.9 This question was generally adequately done, though a significant number of students had no idea of what insider trading is.

CANADIAN CERTIFIED GENERAL ACCOUNTANTS' ASSOCIATION

LAW 108 EXAMINATION
JUNE, 1980
SUGGESTED SOLUTIONS

Marks — Time: 3 Hours

9 Q. 1 These boards and other commissions and tribunals are set up for several reasons:

1. They can develop expertise in narrow areas and are better able than parliament to make detailed policy decisions about matters coming within their area of expertise.

2. They can offer cheaper and more efficient methods for dealing with certain kinds of issues.

3. They can permit public participation in their rule-making process that would be impossible for parliament to provide.

12 Q. 2 The opera society could bring an action against Sarah for damages for breach of contract for singing on August 31, 1979 and they could seek an injunction to prevent her breaching the contract to sing. Damages might be hard to assess, but the court would do the best it could. An injunction to compel Sarah to sing would not be granted, though an injunction to prevent her singing for anyone else might be. The reason why Sarah would not be forced to perform is because this would look too much like some form of enforced servitude.

The society could also use either the breach on August 31 or the prospective refusal as an excuse not to employ Sarah so that they could immediately seek a replacement. The society could also sue immediately for damages for the future breach. Sarah's statement about going to Mexico could be an anticipatory breach of contract.

12 Q. 3 Barry may have no claim based on the contract -- after all, the contract said that payment would be made on completion. However, Daphne is enriched by the work that Barry has performed and she should pay for this. If she did not pay her enrichment would be unjust. The amount that Daphne would have to pay would be the amount of the enrichment she has received. This is not necessarily the amount of $1,300, though given that this was the fair value it likely would be.

Barry could also be liable to any increased costs Daphne may incur in having to hire another painter to do the rest of the house.

9 Q. 4 The general rule is that goods remain at the risk of the seller until property (title) passes to the buyer. Whether Frank can get his money back or not depends on whether the risk was on him or on Universe Motors Inc., and this depends on whether property had passed to Frank at the time of the loss. The rule for the passing of property under the S.G.A. governs. The applicable rule is Rule 2 of S. 20. (Notes P. 4.10). Since notice that the work had been done had not been given to Frank, property remained in Universe, and the risk is on them. Frank can sue for breach of S. 15: breach of the implied condition that the goods will correspond with their description.

12 Q. 5 The common law provides some protection by requiring that the employee owes her employer a fiduciary duty so that the sales manager cannot do certain things to harm you during her employment and afterwards, e.g. take lists of customers and confidential information to competitors or for her own use.

You could try a non-competition clause provided it was reasonable, i.e. restricted the sales manager from competing with you for a reasonable time and in a reasonable geographic area after she should leave her job.

9 Q. 6 The principal feature of a negotiable instrument is the position of the holder in due course. As between the parties, the fact that the obligation of one to pay the other may be contained in a negotiable instrument is unimportant and does not change the right that either may have against the other. As against a holder in due course the drawer or maker of a negotiable instrument, bill of exchange, cheque or promissory note, has no right to assert those defences that he might have had if he had been sued by the original party to whom he gave the instrument. The effect that the possession of the instrument by a holder in due course has is achieved by transfer of the instrument itself. It represents the debt of the drawer or maker and is not just evidence of the debt. The concept of negotiability avoids most of the disadvantages of assignment: the problems of competing assignments, the "equities" and the effect of payment to the assignee.

12 Q. 7 The risks that Anne may be running arise from the fact that she and Helen may be in partnership. The facts that are relevant to determine these are set out in s. 4 of the Act. S.4(c) is particularly relevant. That subsection states that "the receipt by a person of a share of the profits of a business is *prima facie* evidence that he is a partner in the business. . ." Anne does not appear to fall in any of the exceptions that are listed. (Notes p. 7:6).

The way that Anne has to avoid the risks is to follow the requirements for the dissolution of a partnership. These involve the giving of notice in the Gazette so that any potential liability to new customers or suppliers is avoided and the giving of *actual notice* to all existing customers and suppliers (Notes, p. 7:10)

13 Q. 8 There are requirements that the widely-held corporation has to meet whenever it seeks to raise money for the public (issue of a prospectus etc.). There are organizational requirements (the CBCA requires the widely held corporation to have at least three directors) and there are disclosure obligations especially if the corporation's securities are listed on a stock exchange.

12 Q. 9

1. An insider has to report to the director any trades he may have made in the corporation's securities when the corporation is a widely-held corporation.

2. An insider may be liable to compensate any person who suffers any loss by reason of the transaction in question. This applies to all insiders of all corporations.

3. The relevant acts have wide definitions of insiders and those who are caught by the provisions.

100

END OF SOLUTIONS

CANADIAN CERTIFIED GENERAL ACCOUNTANTS' ASSOCIATION
MANAGERIAL STATISTICS 203 EXAMINATION
JANUARY, 1980

Note: 1) 1 Schedule of formulae attached.

2) 1 Standard Normal Curve Table attached.

3) A calculator may be used. In any question involving calculations, the method used to obtain the answer must be shown to obtain full marks. Answers must be explained clearly and without ambiguity.

Marks **Time: 3 hours**

23 Q. 1. The manager of a chain of supermarkets undertook an extensive analysis of the size of orders put through the checkout counters of two of the supermarkets in the chain. The two supermarkets selected for the analysis were similar in size, sales, and type of market served.

The analysis produced the following statistics for each of the two supermarkets:

Supermarket	**A**	**B**
Mean	\$35	\$40
Median	35	30
Standard deviation	3	3.5
(A is normally distributed)		

Required:

(5) (a) If one order was selected at random from A, what is the probability that it would have a value equal to, or exceeding \$42.5?

(7) (b) If you were to select one order at random from A and one from B, what is the probability that both would be less than \$30?

(11) (c) If you were to select seven orders at random from A, what is the probability that three of the seven would have a value less than \$30?

12 Q. 2. Our office manager decided to set up work standards for some of the reasonably routine tasks in the office. The typing of monthly invoices was one such task. Although there has been some dissatisfaction with the new procedures the office manager believes that efficiency has improved. A carefully executed sample check of the time required resulted in an arithmetic mean of 3.76 minutes and a standard deviation of 1.12 minutes. A sample of 100 observations was taken.

Because of the dissatisfaction he has decided to continue with the new approach if there has been a significant increase in efficiency; specifically, if the sample results support the proposition that the average time is not less than 4.0 minutes.

Required:
Do the sample results support continuing with the new approach? Use a probability criterion of 0.98.

8 Q. 3. Compare and contrast the Laspeyres' index

$$\frac{\Sigma \text{ Pn Qo}}{\Sigma \text{ Po Qo}} .100$$

and the Paasche index

$$\frac{\Sigma \text{ Pn Qn}}{\Sigma \text{ Po Qn}} .100$$

4 Q. 4. What are the basic components of any economic time series?

Marks

6 Q. 5. A random sample of 100 gallons of paint was tested to determine the area that a gallon would cover. The following statistics were obtained:

Mean	420
Median	420
Standard deviation	80

Required:
What is the probability that, on the average, a gallon will cover between 410 and 440 sq. ft.? It is your intention to buy a large quantity.

28 Q. 6. A manufacturer of widgets has kept a careful weekly record of production volume (in units), electric power used, and man-hours of labour employed. The range of output in which the data were compiled was 5,000 to 10,000 units per week. The following statistics were computed:

Electric Power

$Y = 65 + 3.5X$
$Syx = 24$
$Sy = 28$

Where Y is electric power and X is units of production.

Labour

$Y = -22 + 12X$
$Syx = 24$
$Sy = 31$

Where Y is labour hours and X is units of production.

Required:

(8) (a) (i) Calculate ''r'' (the coefficient of correlation) for both electric power and labour.
(ii) What does ''r'' indicate in these examples?

(8) (b) It may be noted that the standard error of estimate for electric power equals the standard error of estimate for labour. Why is this of no significance or interest?

(12) (c) List the factors to be considered when determining the validity of the equations for planning purposes.

5 Q. 7. You have been provided with weekly inventory withdrawal records for several weeks. From experience we know that there are significant trend and seasonal effects. Our records show that the number of units withdrawn from inventory for weeks 26, 27, 28, and 29 were 120, 140, 130, 170 units, respectively. We have calculated the correction for trend to be +3 units per week. The seasonal correction factor for week 29 over week 28 is 1.02; for week 30 over 29 it is 1.05; for week 31 over 30 it is .97. With a value of α=0.15, the estimated number of units for week 29 is 136.

Required:
Calculate the estimate for week 30 (to one decimal place).

Marks

14 Q. 8. Indicate which of the following statements are true (write T opposite the question number in your answer booklet), and amend any that are incorrect. In the latter case you will be given credit only if you have correctly amended the errors in the statement. Each part is worth 2 marks.

(a) If all possible samples of size "n" were taken from a finite universe of size "N", the mean of the sample means would equal the hypothesized mean.

(b) If the standard error of estimate equals the standard deviation (of the Y values), there must be perfect correlation.

(c) The probability that an event will occur must be greater than or equal to zero but less than or equal to one. The probability that an event will *not* occur must be less than or equal to zero but more than or equal to minus one (that is, it is negative).

(d) The Z value for a significance test of the mean is defined as the difference between the sample mean and the universe mean divided by $\sigma/\sqrt{n}$.

(e) The median is a value selected to make the sum of the items below the median equal to the sum of the items above the median.

(f) When setting up the parameters for a hypotheses test, one must consider both Type I and Type II error. The only way to reduce both Type I and Type II errors at the same time is to reduce the value of σ.

(g) A null hypotheses states that there is no statistically significant difference between the sample mean and the hypothesized mean.

100

END OF EXAMINATION

SELECTED FORMULAE

$$r^2 = 1 - \frac{Syx^2}{Sy^2}$$

$$\bar{x} = \frac{\Sigma x}{n}$$

$$\sigma_{\bar{x}} = \frac{\sigma}{\sqrt{n}}$$

$$s = \sqrt{\frac{\Sigma(x-\bar{x})^2}{n-1}}$$

$$\bar{x} = \frac{\Sigma fx}{n}$$

$$\sqrt{1 - \frac{n}{N}}$$

$$\bar{x} = \frac{\Sigma wx}{\Sigma w}$$

$$\sigma_{\bar{x}} = \frac{s}{\sqrt{n}}$$

$$Z = \frac{H-\bar{x}}{\sigma_{\bar{x}}}$$

$$\sigma = \sqrt{\frac{\Sigma (x-\mu)^2}{n}}$$

$$Z = \frac{H - {}^{x}/_{n}}{\sigma_{x/n}}$$

$$D_{t+1} = \alpha S_t + (1-\alpha) D_t$$

$$r^2 = 1 - \frac{(n-2)\, Syx^2}{(n-1)\, Sy^2}$$

$$D_{t+1} = \alpha (S_t - D_t)$$

$$P(x; n) = \binom{n}{x} p^x (1-p)^{n-x}$$

$$E_{t+1} = M_{t+1} \left[\alpha S_t + (1-\alpha) E_t + T_{t+1}\right]$$

$$\binom{n}{x} = \frac{n!}{x!\,(n-x)!}$$

$$I = \frac{\Sigma\, Pn\, Qo}{\Sigma\, Po\, Qo} \bullet 100$$

$$I = \frac{\Sigma\, Pn\, Qn}{\Sigma\, Po\, Qo} \bullet 100$$

$$I = \frac{\Sigma\, Pn\, Qn}{\Sigma\, Po\, Qn} \bullet 100$$

$$Y = a + bX$$

$$b = \frac{n\Sigma xy - \Sigma x \Sigma y}{n\Sigma x^2 - (\Sigma x)^2}$$

$$a = \frac{\Sigma y - b\Sigma x}{n}$$

$$Syx = \sqrt{\frac{\Sigma (y-y^1)^2}{n-2}}$$

$$Syx = \frac{y^2 - a\Sigma y - b\Sigma xy}{n-2}$$

TABLE I

The Standard Normal Distribution

z	.00	.01	.02	.03	.04	.05	.06	.07	.08	.09
0.0	.0000	.0040	.0080	.0120	.0160	.0199	.0239	.0279	.0319	.0359
0.1	.0398	.0438	.0478	.0517	.0557	.0596	.0636	.0675	.0714	.0753
0.2	.0793	.0832	.0871	.0910	.0948	.0987	.1026	.1064	.1103	.1141
0.3	.1179	.1217	.1255	.1293	.1331	.1368	.1406	.1443	.1480	.1517
0.4	.1554	.1591	.1628	.1664	.1700	.1736	.1772	.1808	.1844	.1879
0.5	.1915	.1950	.1985	.2019	.2054	.2088	.2123	.2157	.2190	.2224
0.6	.2257	.2291	.2324	.2357	.2389	.2422	.2454	.2486	.2517	.2549
0.7	.2580	.2611	.2642	.2673	.2704	.2734	.2764	.2794	.2823	.2852
0.8	.2881	.2910	.2939	.2967	.2995	.3023	.3051	.3078	.3106	.3133
0.9	.3159	.3186	.3212	.3238	.3264	.3289	.3315	.3340	.3365	.3389
1.0	.3413	.3438	.3461	.3485	.3508	.3531	.3554	.3577	.3599	.3621
1.1	.3643	.3665	.3686	.3708	.3729	.3749	.3770	.3790	.3810	.3830
1.2	.3849	.3869	.3888	.3907	.3925	.3944	.3962	.3980	.3997	.4015
1.3	.4032	.4049	.4066	.4082	.4099	.4115	.4131	.4147	.4162	.4177
1.4	.4192	.4207	.4222	.4236	.4251	.4265	.4279	.4292	.4306	.4319
1.5	.4332	.4345	.4357	.4370	.4382	.4394	.4406	.4418	.4429	.4441
1.6	.4452	.4463	.4474	.4484	.4495	.4505	.4515	.4525	.4535	.4545
1.7	.4554	.4564	.4573	.4582	.4591	.4599	.4608	.4616	.4625	.4633
1.8	.4641	.4649	.4656	.4664	.4671	.4678	.4686	.4693	.4699	.4706
1.9	.4713	.4719	.4726	.4732	.4738	.4744	.4750	.4756	.4761	.4767
2.0	.4772	.4778	.4783	.4788	.4793	.4798	.4803	.4808	.4812	.4817
2.1	.4821	.4826	.4830	.4834	.4838	.4842	.4846	.4850	.4854	.4857
2.2	.4861	.4864	.4868	.4871	.4875	.4878	.4881	.4884	.4887	.4890
2.3	.4893	.4896	.4898	.4901	.4904	.4906	.4909	.4911	.4913	.4916
2.4	.4918	.4920	.4922	.4925	.4927	.4929	.4931	.4932	.4934	.4936
2.5	.4938	.4940	.4941	.4943	.4945	.4946	.4948	.4949	.4951	.4952
2.6	.4953	.4955	.4956	.4957	.4959	.4960	.4961	.4962	.4963	.4964
2.7	.4965	.4966	.4967	.4968	.4969	.4970	.4971	.4972	.4973	.4974
2.8	.4974	.4975	.4976	.4977	.4977	.4978	.4979	.4979	.4980	.4981
2.9	.4981	.4982	.4982	.4983	.4984	.4984	.4985	.4985	.4986	.4986
3.0	.4987	.4987	.4987	.4988	.4988	.4989	.4989	.4989	.4990	.4990

CANADIAN CERTIFIED GENERAL ACCOUNTANTS' ASSOCIATION
MANAGERIAL STATISTICS 203 EXAMINATION
SUGGESTED SOLUTIONS
JANUARY, 1980

Marks **Time: 3 hours**

23 Q. 1. (a) $Z = \dfrac{42.5-35}{3} = 2.5$

(5)

The required probability is $0.5-0.4938 = 0.0062$

(7) (b) Probability of one of A less than 30:

$Z = \dfrac{35-30}{3} = 1.67$

Pr. is $0.5-0.4525 = 0.0475$

Probability of one of B is .5
Probability of both is $(0.0475)\ (.5) = 0.02375$

(11) (c) From (b) the probability of one less than \$30 is .0475.
The required probability is

$\left(\dfrac{7!}{3!4!}\right) (0.0475)^3\ (0.9525)^4$

$= 35\ (.000107)\ (.823114)$
$= 0.00308$ or 0.003

12 Q. 2. N=100; P=0.98 or Z=2.055 for a one-tailed test.

$\sigma_{\bar{X}} = \dfrac{1.12}{\sqrt{100}} = 0.112$

for the hypotheses test $Z = \dfrac{4.0-3.76}{0.112}$

$= \dfrac{0.24}{0.112}$

$= 2.143$

Reject for a one-tailed test.

8 Q. 3. Both indexes measure price changes in a set of commodities over time. Laspeyres' index measures only price changes for a set of commodities with a constant set of weights and becomes progressively out of date. The Paasche index keeps the index current and reflects changes in the relative importance (quantity) of commodities. However, it is more costly to produce, the index number can be compared to the base year only, and the index not only measures price changes, but also reflects changes in the relative importance of commodities.

4 Q. 4. Secular trend
Seasonal variations
Cyclical variations
Irregular variations (random or erratic fluctuations)

Marks

6 Q. 5. $\sigma_{\bar{X}} = \dfrac{80}{\sqrt{100}} = 8$

$Z_1 = \dfrac{420-410}{8} = 1.25$

$Z_2 = \dfrac{440-420}{8} = 2.5$

The required probability is $0.3944+0.4938 = 0.8882$.

28 Q. 6.

(8) (a) (i)

Electric Power

$r^2 = 1 - \dfrac{24^2}{28^2}$

$= 1 - .7347$

$= .2653$

$r = .5151$

Labour

$r^2 = 1 - \dfrac{24^2}{31^2}$

$= 1 - .5994$

$= .4006$

$r = .6329$

(ii) More of the variation in production is explained by the variation in labour hours than by variations in electric power usage. In other words, labour is a better fit.

(8) (b) Syx is a measure of variation about the regression equation in Y units. The variation in power used and labour employed cannot be directly compared.

(12) (c) The values of r suggest that the regression equation for labour is a better fit than is the equation for electric power.

There are a number of additional points that may be made.

(i) There is always a question of a spurious relationship. There is an implicit assumption that there is a logical relationship between output and both power and labour.

(ii) The equations may be valid at the time of the study. If conditions change, the equations will be unreliable.

(iii) The equations are valid only within the range of 5000 to 10,000 units.

(iv) It is assumed that a straight-line adequately represents the relationship. The negative value of "a" in the labour equation suggests that this is not a valid assumption. It certainly is not valid outside the range of the data used.

5 Q. 7. The basic exponential smoothing formula is $D_{t+1} = \alpha S_t + (1-\alpha)D_t$.

To include the trend and seasonal corrections, we must modify the estimate,

$E_{t+1} = 1.05\ [0.15\ (170) + 0.85\ (136) + 3]$
$= 1.05\ (144.1)$
$= 151.3$ (to one decimal place)

Marks

14 Q. 8. (2 marks for each part)

(a) "hypothesized" should read "universe" or "population".

(b) "perfect" should read "zero" or "no".

(c) The second sentence should be deleted as totally in error, or it may be rewritten, "The probability that an event will not occur also must be greater than or equal to zero but less than or equal to one."

(d) "universe" should read "hypothesized".

(e) "sum" should read "number".

(f) "to reduce the value of σ" should read "to increase the size of the sample".

(g) T

100

END OF SOLUTIONS

CANADIAN CERTIFIED GENERAL ACCOUNTANTS' ASSOCIATION

MANAGERIAL STATISTICS 203 EXAMINATION
MARCH 1980

Marks

Time: 3 Hours

Note: Show *all* calculations.
: 1 Schedule of Equations and Formulas attached.
: 1 Standard Normal Probability Distribution Table attached.
: 1 Students' t Distribution Table attached.

20 Q. 1. For the following twenty statements determine which *word in the brackets makes the statement true*. Enter that *word* opposite the statement number in your answer booklet.

(1) (a) The probability distribution of a discrete random variable (can, cannot) be presented in a table.

(1) (b) The t distribution is used in hypothesis testing when the standard deviation of the (population, sample) is unknown.

(1) (c) In order that a sample be an accurate representation of the population from which it was drawn it must be free of (bias, error).

(1) (d) When constructing a frequency polygon, plotted points are measured along the horizontal axis corresponding to class (limits, marks).

(1) (e) When the probability of some event is affected by the occurrence of some other event, the events are said to be (independent, dependent) events.

(1) (f) The sample proportion is a (biased, unbiased) estimation of the population proportion.

(1) (g) The value of every observation in a data set is taken into account when we calculate the (median, mean).

(1) (h) One characteristic of judgement sampling is that the degree of statistical analysis required is (increased, decreased) as compared to that necessary in random sampling.

(1) (i) The expression P(A or B) = P(A) + P(B) − P(A and B) is valid if the events A and B are not mutually (independent, exclusive).

(1) (j) The rejection of a null hypothesis when it is actually (true, false) is called a Type I error.

(1) (k) The coefficient of variation is a (relative, absolute) measure of dispersion.

(1) (l) The normal approximation to the binomial distribution is appropriate if the number of (trials, successes) is greater than 30.

(1) (m) A "less than" ogive is s-shaped and slopes up to the (left, right).

(1) (n) The expression, $P(A/B) = \dfrac{P(AB)}{P(B)}$, is invalid if the events A and B are statistically (exclusive, independent).

(1) (o) The area between plus and minus 2.15 standard deviations is (more, less) than 97 percent of the area under the normal curve.

(1) (p) Another name for an empirical probability is (subjective, objective) probability.

(1) (q) A measure of dispersion which takes into account every observation in the data set is the (quartile, standard) deviation.

(1) (r) If a probability distribution is positively skewed, the mean is (larger, smaller) than the median.

(1) (s) The classes in any relative frequency distribution are mutually (exclusive, exhaustive).

(1) (t) If P(A) = .5, P(B) = .6 and P(A and B) = .4, then P(A or B) is (greater, less) than .5.

10 Q. 2. The following table presents the value of heavy machinery assets purchased by Erickson Manufacturing Ltd. for each of four years. Also presented are the price indexes for the four years.

Year	**Asset Purchases ($ '000)**	**Price Index (1971 = 100)**
1975	495	165.4
1976	503	172.2
1977	517	187.1
1978	523	211.8

Required:

(8) (a) Express the assets purchased for each year in terms of 1975 prices.

(2) (b) What is your response to the statement "Expenditures on heavy machinery have been increasing steadily since 1975?"

10 Q. 3. The management team of Boro Industries Ltd. is trying to decide whether to build a large, medium or small plant at a new location. Demand for the company's product in the new area is uncertain, but the marketing manager has assigned the probabilities listed in the table below to three levels of demand. The table also shows the conditional profits (in millions of dollars) for each plant size and level of demand.

Plant Size	**State of Nature (Demand)** High	Moderate	Low
Large	7	2	−1
Medium	6	3	0
Small	5	4	1
Probability	.3	.5	.2

Required:

(6) (a) Construct the decision tree for this decision problem.

(4) (b) What decision should management take?

Page 2 of 4

30 Q. 4. A bank's auditor takes a random sample of 100 accounts from a file of 1000 savings accounts. He calculates the mean account balance to be \$473.25 with a standard deviation of \$107.25.

Required:

(7) (a) Calculate the value of the standard error of the mean.

(8) (b) If the bank manager claims the average balance of savings accounts is at least \$500.00, does the auditor's sample evidence support that claim? Use $\alpha = .05$.

(8) (c) What is the 99% confidence interval for the true population mean account balance?

(7) (d) If the true population mean savings account balance is \$480.35, what is the probability of a randomly selected account having a balance of \$600.00 or greater?

15 Q. 5. In conjunction with an annual audit, an accounting firm makes note of the time, in minutes, to audit 15 account balances. The audit times are as follows:

34	24	43
25	39	19
10	49	34
34	47	15
48	22	37

Required:

(6) (a) Arrange the data from lowest to highest and give the median, mode and arithmetic mean.

(6) (b) Construct a frequency distribution and a "less than" cumulative relative frequency distribution from the data using intervals of 10 minutes.

(1) (c) What percentage of the audit times are less than 30 minutes?

(2) (d) What percentage of the audit times are 20 minutes or more but less than 40 minutes?

15 Q. 6. The manager of a jobshop printing firm wishes to estimate the relationship between the number of copies produced by an offset printing method and associated direct labour cost. Seven orders were randomly selected and the following information obtained:

Order	**Number of Copies**	**Total Direct Labour Cost ($)**
1	100	2.80
2	80	3.00
3	150	3.40
4	50	2.40
5	20	1.80
6	200	4.00
7	175	3.80

The manager has calculated the following values: $\Sigma XY = 2651$, $\Sigma X^2 = 112425$, $\Sigma Y^2 = 67.84$, $\Sigma Y = 21.2$, $\Sigma X = 775$.

Required:

(6) (a) Compute the least-squares regression line (to four decimal places).

(9) (b) The manager has just received a printing order for 125 copies. What is the 90% prediction interval for the direct labour costs for this order?

100

END OF EXAMINATION

EQUATIONS AND FORMULAS

$$\bar{x} = \frac{\Sigma x}{n}$$

$$\bar{x}_w = \frac{\Sigma(wx)}{\Sigma w}$$

$$G.M. = \sqrt[n]{(x_1)(x_2)(x_3)\ldots(x_n)}$$

$$\frac{\hat{\sigma}}{\bar{x}}(100)$$

$$\frac{Q_3 - Q_1}{2}$$

$$P(r;n) = \frac{n!}{r!(n-r)!} \quad p^r q^{n-r}$$

$$\hat{\sigma} = \sqrt{\frac{\Sigma(x-\bar{x})^2}{n-1}}$$

$$\sigma = \sqrt{npq}$$

$$u = np$$

$$Z = \frac{x - u}{\sigma}$$

$$Z = \frac{\bar{x} - u}{\sigma_{\bar{x}}}$$

$$\hat{\sigma}_{\bar{x}} = \frac{\hat{\sigma}}{\sqrt{n}}$$

$$u_{\bar{p}} = p$$

$$\hat{\sigma}_{\bar{p}} = \sqrt{\frac{pq}{n}}$$

$$\sqrt{\frac{N-n}{N-1}}$$

$$\hat{Y} = a + bX$$

$$b = \frac{\Sigma XY - n\bar{X}\bar{Y}}{\Sigma X^2 - n\bar{X}^2}$$

$$a = \bar{Y} - b\bar{X}$$

$$r^2 = \frac{a\Sigma Y + b\Sigma XY - n\bar{Y}^2}{\Sigma Y^2 - n\bar{Y}^2}$$

$$S_e = \sqrt{\frac{\Sigma Y^2 - a\Sigma Y - b\Sigma XY}{n-2}}$$

$$b = \frac{\Sigma xY}{\Sigma x^2}$$

$$\hat{Y} = a + bx$$

$$a = \bar{Y}$$

$$r^2 = \frac{a\Sigma Y + b\Sigma xY - n\bar{Y}^2}{\Sigma Y^2 - n\bar{Y}^2}$$

$$r^2 = 1 - \frac{\Sigma(Y-\hat{Y})^2}{\Sigma(Y-\bar{Y})^2}$$

$$S_e = \sqrt{\frac{\Sigma(Y-\hat{Y})^2}{n-2}}$$

$$\frac{\Sigma P_1 Q_0}{\Sigma P_0 Q_0}$$

$$\frac{\Sigma P_1 Q_1}{\Sigma P_0 Q_1}$$

$$S_e = \sqrt{\frac{\Sigma Y^2 - a\Sigma Y - b\Sigma xY}{n-2}}$$

TABLE 1
Standard Normal Probability Distribution

z	.00	.01	.02	.03	.04	.05	.06	.07	.08	.09
0.0	.0000	.0040	.0080	.0120	.0160	.0199	.0239	.0279	.0319	.0359
0.1	.0398	.0438	.0478	.0517	.0557	.0596	.0636	.0675	.0714	.0753
0.2	.0793	.0832	.0871	.0910	.0948	.0987	.1026	.1064	.1103	.1141
0.3	.1179	.1217	.1255	.1293	.1331	.1368	.1406	.1443	.1480	.1517
0.4	.1554	.1591	.1628	.1664	.1700	.1736	.1772	.1808	.1844	.1879
0.5	.1915	.1950	.1985	.2019	.2054	.2088	.2123	.2157	.2190	.2224
0.6	.2257	.2291	.2324	.2357	.2389	.2422	.2454	.2486	.2517	.2549
0.7	.2580	.2611	.2642	.2673	.2704	.2734	.2764	.2794	.2823	.2852
0.8	.2881	.2910	.2939	.2967	.2995	.3023	.3051	.3078	.3106	.3133
0.9	.3159	.3186	.3212	.3238	.3264	.3289	.3315	.3340	.3365	.3389
1.0	.3413	.3438	.3461	.3485	.3508	.3531	.3554	.3577	.3599	.3621
1.1	.3643	.3665	.3686	.3708	.3729	.3749	.3770	.3790	.3810	.3830
1.2	.3849	.3869	.3888	.3907	.3925	.3944	.3962	.3980	.3997	.4015
1.3	.4032	.4049	.4066	.4082	.4099	.4115	.4131	.4147	.4162	.4177
1.4	.4192	.4207	.4222	.4236	.4251	.4265	.4279	.4292	.4306	.4319
1.5	.4332	.4345	.4357	.4370	.4382	.4394	.4406	.4418	.4429	.4441
1.6	.4452	.4463	.4474	.4484	.4495	.4505	.4515	.4525	.4535	.4545
1.7	.4554	.4564	.4573	.4582	.4591	.4599	.4608	.4616	.4625	.4633
1.8	.4641	.4649	.4656	.4664	.4671	.4678	.4686	.4693	.4699	.4706
1.9	.4713	.4719	.4726	.4732	.4738	.4744	.4750	.4756	.4761	.4767
2.0	.4772	.4778	.4783	.4788	.4793	.4798	.4803	.4808	.4812	.4817
2.1	.4821	.4826	.4830	.4834	.4838	.4842	.4846	.4850	.4854	.4857
2.2	.4861	.4864	.4868	.4871	.4875	.4878	.4881	.4884	.4887	.4890
2.3	.4893	.4896	.4898	.4901	.4904	.4906	.4909	.4911	.4913	.4916
2.4	.4918	.4920	.4922	.4925	.4927	.4929	.4931	.4932	.4934	.4936
2.5	.4938	.4940	.4941	.4943	.4945	.4946	.4948	.4949	.4951	.4952
2.6	.4953	.4955	.4956	.4957	.4959	.4960	.4961	.4962	.4963	.4946
2.7	.4965	.4966	.4967	.4968	.4969	.4970	.4971	.4972	.4973	.4974
2.8	.4974	.4975	.4976	.4977	.4977	.4978	.4979	.4979	.4980	.4981
2.9	.4981	.4982	.4982	.4983	.4984	.4984	.4985	.4985	.4986	.4986
3.0	.4987	.4987	.4987	.4988	.4988	.4989	.4989	.4989	.4990	.4990

TABLE 2
t Distribution

Degrees of freedom	Area in both tails combined			
	.10	.05	.02	.01
1	6.314	12.706	31.821	63.657
2	2.920	4.303	6.965	9.925
3	2.353	3.182	4.541	5.841
4	2.132	2.776	3.747	4.604
5	2.015	2.571	3.365	4.032
6	1.943	2.447	3.143	3.707
7	1.895	2.365	2.998	3.499
8	1.860	2.306	2.896	3.355
9	1.833	2.262	2.821	3.250
10	1.812	2.228	2.764	3.169
11	1.796	2.201	2.718	3.106
12	1.782	2.179	2.681	3.055
13	1.771	2.160	2.650	3.012
14	1.761	2.145	2.624	2.977
15	1.753	2.131	2.602	2.947
16	1.746	2.120	2.583	2.921
17	1.740	2.110	2.567	2.898
18	1.734	2.101	2.552	2.878
19	1.729	2.093	2.539	2.861
20	1.725	2.086	2.528	2.845
21	1.721	2.080	2.518	2.831
22	1.717	2.074	2.508	2.819
23	1.714	2.069	2.500	2.807
24	1.711	2.064	2.492	2.797
25	1.708	2.060	2.485	2.787
26	1.706	2.056	2.479	2.779
27	1.703	2.052	2.473	2.771
28	1.701	2.048	2.467	2.763
29	1.699	2.045	2.462	2.756
30	1.697	2.042	2.457	2.750
40	1.684	2.021	2.423	2.704
60	1.671	2.000	2.390	2.660
120	1.658	1.980	2.358	2.617
Normal Distribution	1.645	1.960	2.326	2.576

CANADIAN CERTIFIED GENERAL ACCOUNTANTS' ASSOCIATION
MANAGERIAL STATISTICS 203 EXAMINATION
MARCH, 1980
EXAMINER'S COMMENTS

Specific

Q.1 Quite well done, with parts (a), (g) and (t) most frequently wrong, and parts (b), (e), (g), (j), (k), (l), (n) and (o) rarely wrong.

Q.2 Students generally had difficulty with this question. If part (a) was correctly solved, the interpretation of the results was usually correct. Some seem to believe that the purchasing power of the dollar increases when the price index increases. The most common errors were: (i) calculation of wrong price index, e.g., 1978 = 523/495 x 100 = 106, or 1978 = 211.8 - 165.4 = 46.4; tried to use the formula $\Sigma P_1Q_0 / \Sigma P_0Q_0$ to calculate an index; (ii) use of the reciprocal of the correct index, or multiplied asset purchases by index instead of dividing. Some students calculated the correct index but did not know how to use it.

Q.3 This question was generally well done. The most common errors were: (i) did not carry out expected profit calculations correctly and therefore concluded that large plant was most profitable; (ii) assigned probabilities to plant sizes instead of demand and concluded that medium plant was most profitable; (iii) difficulty with decimals and negative numbers.

Q.4 Generally well answered, indicating good understanding of concepts. Most common errors were:

(a) Omission of finite population multiplier and failure to take square root of F.P.M. Also use of 100 or 473.25 instead of 107.25 for $\hat{\alpha}$.

(b) Failure to use one-tailed test and therefore obtained wrong value of Z for $\alpha = .05$.

(c) Usually correctly answered, but some used $\hat{\alpha}$ instead of $\hat{\alpha}_{-}$.

(d) Failure to use $\hat{\alpha}$ instead of $\hat{\alpha}_{\overline{X}}$. The result was Z=11.2, which baffled many. A common mistake was to write Z = 1.12 = .3686. The correct statement is $P(Z \leq 1.12) = .3686$.

Q.5 Part (a) was reasonably well answered. In part (b), students often failed to label the class intervals, relative frequency and cumulative relative frequency distributions. Parts (c) and (d) were generally correct if part (b) was correct.

Q.6 This question was very susceptible to round-off errors, and allowance was made in grading. In part (a), the most common error was the use of the wrong formulas for calculating 'a' and 'b'. The most common error was the use of the normal distribution (Z value) instead of the t value when calculating the prediction interval.

MANAGERIAL STATISTICS 203 EXAMINATION
MARCH 1980

SUGGESTED SOLUTIONS

Marks **Time: 3 Hours**

20 Q. 1. (a) can
(b) population
(c) bias
(d) marks
(e) dependent
(f) unbiased
(g) mean
(h) decreased
(i) exclusive
(j) true
(k) relative
(l) trials
(m) right
(n) independent
(o) less
(p) objective
(q) standard
(r) larger
(s) exclusive
(t) greater

10 Q. 2. (a)

(8)

Year	Asset Purchases ($ '000)	Assets adjusted to 1975 prices
1975	495	495.0
1976	503	483.1
1977	517	457.0
1978	523	408.4

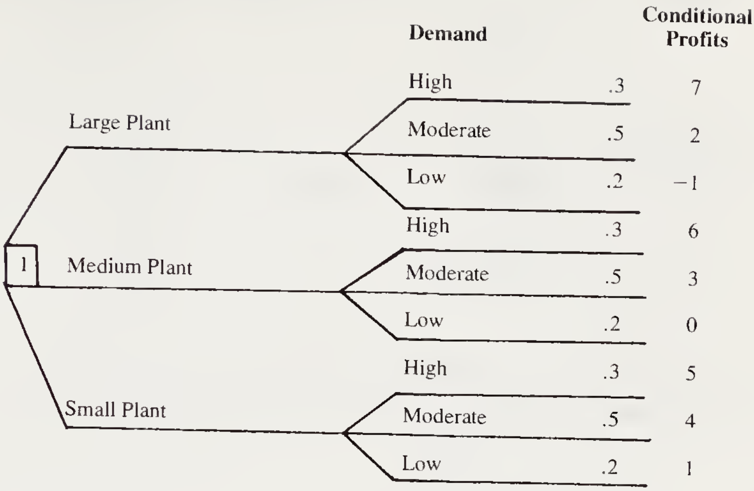
$$1976: 503 \times \frac{165.4}{172.2} = 483.1$$

$$1977: 517 \times \frac{165.4}{187.1} = 457.0$$

$$1978: 523 \times \frac{165.4}{211.8} = 408.4$$

(2) (b) There has been a *decrease* in the real value assets purchased for 1976, 1977 and 1978 relative to 1975.

10 Q. 3.
(6) (a)



(4) (b) Expected profits

Large plant: $.3\,(7) + .5\,(2) + .2\,(-1) = 2.9$

Medium plant: $.3\,(6) + .5\,(3) + .2\,(0) = 3.3$

Small plant: $.3\,(5) + .5\,(4) + .2\,(1) = 3.7$

Based upon expected profits, management should build the small plant.

30 Q. 4. (a) Because the sample is more than 5 percent of the population, the finite population multiplier is used. Then

(7)
$$\hat{\sigma}_{\bar{x}} = \frac{\hat{\sigma}}{\sqrt{n}} \sqrt{\frac{N-n}{N-1}}$$

$$= \frac{107.25}{\sqrt{100}} \sqrt{\frac{1000-100}{1000-1}}$$

$$= 10.725 \sqrt{\frac{900}{999}}$$

$$= 10.725\ (.949)$$

$$= \underline{\$10.18}$$

(8) (b) One-tailed test with $\alpha = .05$

$$Z = \frac{\bar{x} - u_{H_0}}{\hat{\sigma}_{\bar{x}}} = \frac{473.25 - 500.00}{10.18}$$

$$= \frac{-26.75}{10.18} = -2.63$$

Because $Z_{.05} = -1.645$, and Z is -2.63, the bank manager's claim is not supported by the auditor's sample evidence.

(8) (c) The Z values for a 99% C.I. are ± 2.57. Then, the confidence limits are $\bar{x} \pm 2.57\ \hat{\sigma}_{\bar{x}}$

The upper limit is
473.25 + 2.57 (10.18) = \$499.41

The lower limit is
473.25 − 2.57 (10.18) = \$447.09

(7) (d)
$$Z = \frac{x - u}{\hat{\sigma}} = \frac{600 - 480.35}{107.25}$$

$$= \frac{119.65}{107.25} = 1.12$$

Area for Z = 1.12 is .3686.

$P(x > 600) = P(Z > 1.12)$
$= .5 - .3686 = \underline{\underline{.1314}}$

15 Q. 5. (a) The data arranged from smallest to largest are:

(6)

10 15 19 22 24 25 34 34

34 37 39 43 47 48 49

Median = 34

Mode = 34

Mean = 480/15 = 32

(6) (b)

Audit Time (Minutes)	Frequency	Relative Frequency	Cumulative Relative Frequency
0 - 9	0	0	0
10 - 19	3	.20	.20
20 - 29	3	.20	.40
30 - 39	5	.33	.73
40 - 49	4	.27	1.00

(1) (c) 40 percent of the audit times are less than 30 minutes.

(2) (d) The percentage of audit times which are 20 minutes or more but less than 40 minutes is (.73 − .20 = .53) 53 percent.

15 Q. 6. (a)

(6)

$$\bar{X} = \frac{\Sigma X}{n} = \frac{775}{7} = 110.714$$

$$\bar{Y} = \frac{\Sigma Y}{n} = \frac{21.2}{7} = 3.0286$$

$$b = \frac{\Sigma XY - n\bar{X}\bar{Y}}{\Sigma X^2 - n\bar{X}^2}$$

$$= \frac{2651 - 7(110.714)(3.0286)}{112425 - 7(110.714)^2}$$

$$= \frac{2651 - 2347.16}{112425 - 85803.13}$$

$$= \frac{303.85}{26621.87} = .011414$$

$$a = \bar{Y} - b\bar{X}$$

$$= 3.0286 - .011414(110.714)$$

$$= 3.0286 - 1.2637$$

$$= 1.7649$$

The regression line is
$\hat{Y} = 1.76 + .0114\,X$

(9) (b)

$$S_e = \sqrt{\frac{\Sigma Y^2 - a\Sigma Y - b\Sigma XY}{n-2}}$$

$$= \sqrt{\frac{67.84 - 1.7649(21.2) - .0114(2651)}{7-2}}$$

$$= \sqrt{\frac{67.84 - 37.416 - 30.22}{5}}$$

$$S_e = \sqrt{\frac{.2026}{5}} = \sqrt{.0405} = .20$$

Predict $\hat{Y}$ for $X = 125$.
$\hat{Y} = 1.76 + .0114(125) = \$3.19$

The value of t for n − 2 degrees of freedom with $\alpha = .10$ and n = 7, is 2.015. The prediction interval is
$\hat{Y} \pm t\,S_e = 3.19 \pm 2.015(.20)$

$= 3.19 \pm .40$

The interval is \$2.79 to \$3.59.

100

END OF SOLUTIONS

CANADIAN CERTIFIED GENERAL ACCOUNTANTS' ASSOCIATION

MANAGERIAL STATISTICS 203 EXAMINATION
JUNE 1980

Marks **Time: 3 Hours**

Note: Show *all* calculations.
: 1 Schedule of Equations and Formulas attached.
: 1 Standard Normal Probability Distribution Table attached.
: 1 Students' t Distribution Table attached.

20 Q. 1. For the following twenty statements determine which *word in the brackets makes the statement true*. Enter that *word* opposite the statement number in your answer booklet.

(1) (a) If P(A) = .3, then also P(A/B) = .3 if the events A and B are statistically (dependent, independent).

(1) (b) A measure of dispersion which is (affected, unaffected) by extremely large or small values in the data set is the quartile deviation.

(1) (c) The joint probability of two or more independent events occurring together or in succession is the (product, sum) of their marginal probabilities.

(1) (d) Extremely large or small values in a data set affect the mean (less, more) strongly than they do the median.

(1) (e) The binomial distribution may be approximated by a normal distribution when n p is (more, less) than .05.

(1) (f) The t distribution becomes closer and closer to approximating a normal distribution as sample size (decreases, increases).

(1) (g) Cluster sampling often may be (more, less) costly than simple random sampling.

(1) (h) The use of stratified sampling is appropriate when each stratum in the population has (large, small) variance within itself.

(1) (i) The class mark is the average of the stated lower and upper class (limits, intervals).

(1) (j) When we accept a null hypothesis when it is actually false, we commit a (Type I, Type II) error.

(1) (k) The closer the sample means are grouped around the population mean, the higher is the (accuracy, precision) of the estimation of the population mean by the sample means.

(1) (l) Seasonal variation is defined as repetitive and predictable movement around the trend line for periods (shorter, longer) than a year.

Q. 1. Continued . . . .

(1) (m) The finite population multiplier is used when the sample is (more, less) than 5 percent of the population.

(1) (n) One characteristic of the Laspeyres method is that in holding to the same base period we are (able, unable) to compare the computed indices for two or more different periods.

(1) (o) If a probability distribution is negatively skewed, the mode is (smaller, larger) than the mean.

(1) (p) One characteristic of the Paasche method of computing an index is that this method makes it relatively (easy, difficult) to compare the indices of two different periods.

(1) (q) Quota sampling is (more, less) reliable than systematic sampling.

(1) (r) As the sample size increases the standard error of the mean (increases, decreases).

(1) (s) A "more than" ogive is s-shaped and slopes (up, down) and to the right.

(1) (t) One significant advantage of using a sampling distribution of the mean is that it is approximately normally distributed when using (small, large) sample sizes.

20 Q. 2. A manufacturer claims that the mean breaking strength of a new synthetic fibre cord is at least 500 kilograms. In order to test the claim, a consumer testing bureau selects a random sample of 49 pieces of cord and determines the mean and standard deviation as 485 and 42 kilograms, respectively.

Required:

(2) (a) Is a one-tailed or a two-tailed test of significance appropriate? Why?

(9) (b) Does the evidence support the manufacturer's claim? Use $\alpha = .05$.

(9) (c) Using the sample information construct a 95 percent confidence interval for the mean breaking strength of the cord. Does this confidence interval include the manufacturer's claimed mean breaking strength?

25 Q. 3. The value of a company's sales of small appliances for a seven year period are given below

Year	Sales ($ '000)
1972	25
1973	28
1974	26
1975	31
1976	28
1977	34
1978	31

The years are coded with 1975 = 0, and the following values are calculated:
$\Sigma xY = 32$, $\Sigma x^2 = 28$, $\Sigma Y^2 = 5947$.

Required:

(7) (a) Calculate the mean and standard deviation of the sales data.

(3) (b) Calculate the trend line for the sales data, and give the origin.

(8) (c) Calculate the coefficient of correlation for the sales data. What percentage of the variation in sales is explained by the trend line?

(7) (d) Using the values for r^2 and $\Sigma (Y - \bar{Y})^2$ obtained above, and the appropriate formulas for r^2 and S_e, calculate the value of S_e.

10 Q. 4. The county of Rockland has determined that the value of the assets of companies which have facilities located in the county have the following distribution:

Assets ($ '000)	Frequency
25.00 - 49.99	12
50.00 - 74.99	18
75.00 - 99.99	26
100.00 - 124.99	36
125.00 - 149.99	38
150.00 - 174.99	34
175.00 - 199.99	22
200.00 - 224.99	10
225.00 - 249.99	4

Required:

(8) (a) Calculate the "less than" cumulative relative frequency distribution for the value of assets in Rockland county.

(2) (b) What percentage of the assets have values equal to or greater than $150,000?

10 Q. 5. From past experience, the auditor for Rankine Manufacturing Ltd. knows that 5 percent of the purchase vouchers have one or more clerical errors. An auditor randomly selects five vouchers and examines them for errors.

Required:

(7) (a) What is the probability that one or fewer vouchers will have one or more errors?

(3) (b) What is the probability that one or more vouchers will have one or more errors?

15 Q. 6. A corner grocer must decide each morning how many baskets of strawberries to stock that day. The strawberries cost him $1.00 per basket and are sold for $2.50 per basket. Any unsold strawberries at the day's end are given away and therefore are a total loss to the grocer. From past experience, the grocer is able to provide the following probability distribution of daily demand.

Number of baskets	**Probability**
1	.5
2	.3
3	.2
	1.0

Required:

(9) (a) Construct the conditional profit table.

(4) (b) Use the expected profit method to determine how many baskets of strawberries the grocer should stock each day.

(2) (c) What is the value of a forecast which would provide the grocer with perfect information on the number of baskets to stock each day?

100

END OF EXAMINATION

CANADIAN CERTIFIED GENERAL ACCOUNTANTS' ASSOCIATION
MANAGERIAL STATISTICS 203 EXAMINATION
JUNE, 1980
EXAMINER'S COMMENTS

Specific

Q.1 Students got parts (d), (e), (g), (k), and (b) wrong most frequently, and got parts (a), (i), (j), (l) correct most frequently.

Q.2 The most common errors were incorrect choices for the Z values for Z_{05} in part (b) and for the 95% C.I. in part (c). Also, some students used the standard deviation instead of the standard error of the mean in parts (b) and (c).

Q.3 Students used the wrong formulas for calculating the regression coefficients 'a' and 'b'. Many students used the coefficient of correlation instead of the coefficient of determination when answering the question presented in part (c).

Q.4 The most common error was the failure to put complete titles above the columns representing the relative frequency and the cumulative relative frequency.

Q.5 This question was the most poorly done in the examination. Many students did not recognize that the problem was to be solved using the binomial probability distribution. Also, many students apparently do not understand how to calculate probabilities using the binomial distribution.

Q.6 The greatest difficulty encountered with this question was getting the conditional profits correct.

CANADIAN CERTIFIED GENERAL ACCOUNTANTS' ASSOCIATION

MANAGERIAL STATISTICS 203 EXAMINATION
JUNE 1980

SUGGESTED SOLUTIONS

Marks **Time: 3 Hours**

20 Q. 1. (a) independent
(b) unaffected
(c) product
(d) more
(e) more
(f) increases
(g) less
(h) small
(i) limits
(j) Type II
(k) precision
(l) shorter
(m) more
(n) able
(o) smaller
(p) difficult
(q) less
(r) decreases
(s) down
(t) large

20 Q. 2.

(2) (a) A *one-tailed* test is appropriate because the public is to be protected against cord failure below 500 kg.

(9) (b) $Z_{.05} = -1.645 \quad u_{H_0} = 500$

$$Z = \frac{\bar{X} - u_{H_0}}{\hat{\sigma}_{\bar{x}}} = \frac{485 - 500}{42/\sqrt{49}}$$

$$= \frac{-15}{6} = -2.5$$

Since $Z < Z_{.05}$, the evidence does not support the manufacturer's claim.

(9) (c) For a 95% C.I. the limits are $\bar{x} \pm 1.96\,\hat{\sigma}_{\bar{x}}$. $\hat{\sigma}_{\bar{x}} = 42/\sqrt{49} = 6$.
Upper confidence limit:
$485 + 1.96\,(6) = 496.76$

Lower confidence limit:
$485 - 1.96\,(6) = 473.24$

No, this confidence interval does not include the manufacturer's claim.

Page 1 of 4

25 Q. 3.

(7) (a)

Y	$Y-\bar{Y}$	$(Y-\bar{Y})^2$
25	−4	16
28	−1	1
26	−3	9
31	+2	4
28	−1	1
34	+5	25
31	+2	4
203	0	60

$$\bar{Y} = 203/7 = \underline{\underline{29}}$$

$$\hat{\sigma} = \sqrt{60/6} = \underline{\underline{\sqrt{10}}}$$

(3) (b) $a = \bar{Y} = 29$

$$b = \frac{\Sigma xY}{\Sigma x^2} = \frac{32}{28} = 1.143$$

The trend line is $\hat{Y} = 29 + 1.143\,x$ with origin July 1, 1975.

(8) (c)

$$r^2 = \frac{a\Sigma Y + b\Sigma xY - n\bar{Y}^2}{\Sigma Y^2 - n\bar{Y}^2}$$

$$= \frac{29(203) + 1.143(32) - 7(29)^2}{5947 - 7(29)^2}$$

$$= \frac{5887 + 36.576 - 5887}{5947 - 5887}$$

$$= \frac{36.576}{60} = .6096$$

$$r = \sqrt{.6096} = \underline{\underline{.781}}$$

About 61 percent of the variation in sales is explained by the trend line.

(7) (d)

$$r^2 = 1 - \frac{\Sigma(Y-\hat{Y})^2}{\Sigma(Y-\bar{Y})^2}$$

$$r^2 = .6096,\ \Sigma(Y-\bar{Y})^2 = 60,\ n = 7$$

$$.6096 = 1 - \frac{\Sigma(Y-\hat{Y})^2}{60}$$

$$60\,(1 - .6096) = \Sigma(Y-\hat{Y})^2$$

$$\frac{60 \times .3904}{7-2} = \frac{\Sigma(Y-\hat{Y})^2}{n-2} = S_e^2$$

$$12 \times .3904 = S_e^2 = 4.6848$$

$$S_e = \sqrt{4.6848} = 2.16$$

NOTE: Up to 5 marks of the 7 is allowed for the calculation of S_e by the following method:

$$S_e = \sqrt{\frac{\Sigma Y^2 - a\Sigma Y - b\Sigma xY}{n - 2}}$$

10 Q. 4.

(8) (a)

Assets ($ '000)	Relative Frequency	Cumulative Frequency
0 - 24.99	0	0
25.00 - 49.99	.06	.06
50.00 - 74.99	.09	.15
75.00 - 99.99	.13	.28
100.00 - 124.99	.18	.46
125.00 - 149.99	.19	.65
150.00 - 174.99	.17	.82
175.00 - 199.99	.11	.93
200.00 - 224.99	.05	.98
225.00 - 249.99	.02	1.00

(2) (b) The percentage of assets with values greater than or equal to $150,000 is (1 − .65 = .35) 35%.

10 Q. 5.

(7) (a) The probability of one or fewer vouchers with errors is P(0) + P(1).

n =5, x = 0, p = .05

$$P(0) = \frac{5!}{0!(5-0)!}(.05)^0(.95)^{5-0}$$

$$= (1)(1)(.7738)$$

$$= \underline{.7738}$$

$$P(1) = \frac{5!}{1!(5-1)!}(.05)^1(.95)^{5-1}$$

$$= \frac{5\,(4!)}{4!}(.05)(.8145)$$

$$= \underline{.2036}$$

$$P(0) + P(1) = .7738 + .2036 = \underline{\underline{.9774}}$$

(3) (b) The probability of one or more vouchers having errors is 1 −P(0). From (a) P(0) = .7738
Then 1 −P(0) = 1. − .7738 = $\underline{\underline{.2262}}$

15 Q. 6. (a) **Conditional Profit Table**
(9)

	State of Nature (demand)		
Stock	**1**	**2**	**3**
1	1.50	1.50	1.50
2	.50	3.00	3.00
3	–.50	2.00	4.50

(4) (b) Expected profits are:

E[1] = 1.50(.5) + 1.50(.3) + 1.50(.2) = \$1.50

E[2] = .50(.5) + 3.00(.3) + 3.00(.2) = \$1.75

E[3] = –.50(.5) + 2.00(.3) + 4.50(.2) = \$1.25

The grocer should stock 2 baskets of strawberries each day.

(2) (c) The expected profits under certainty are:
1.50(.5) + 3.00(.3) + 4.50(.2) = \$2.55
The expected value of perfect information is:
\$2.55 – 1.75 = \$.80

100

END OF SOLUTIONS

Page 4 of 4

Marks **Time: 3 Hours**

24 Q. 1. The transactions summarized below were recorded during the current year.

Required:

Determine, for each transaction, what accounting principle(s) was (were) violated (if any), the nature of the violation and in each instance indicate how the transaction should have been recorded.

a) The company's plant is located in a low-lying area and subject to periodic flooding. The company is unable to obtain flood insurance and bore the cost of damage as required. The current year's flood was particularly severe and the following entry was made to repair flood losses:

Retained earnings	8,900	
Cash		8,900

b) The company needed a storage shed and received firm quotes from two contractors of \$73,000 and \$75,000 respectively. The company decided to build it themselves. The cost was \$65,000. The following entry was made:

Fixed asset — warehouse	73,000	
Cash		65,000
Revenue		8,000

c) To construct the structure in (b) above the company borrowed \$60,000 from the bank at 12% per annum. The loan was repaid when due with 12 months interest. The following entry was made:

Note payable	60,000	
Fixed asset — warehouse	7,200	
Cash		67,200

d) The company received an out of court settlement of a lawsuit which it brought, three years ago, against a competitor for infringement of its patent. The following entry was made:

Cash	30,000	
Revenue		30,000

24 Q. 2.

(10) a) Crown Derby Corporation issued on June 30, 198A, \$100,000 of 8% (payable 4% semi-annually), ten-year bonds dated June 30, at an effective rate of 10%. The proceeds to the company were computed as \$37,689 plus \$49,849 = \$87,538.

Required:

i) What do each of the first two amounts represent?
ii) Record the issue of bonds.
iii) Record the payment of interest on December 31, 198A, and the amortization using the interest method.

(5) b) An investor purchased \$10,000 of the bonds on June 30.

Required:

i) Entry for purchase of bonds (round to nearest dollar).
ii) Entry to record receipt of interest on December 31, 198A (assume investor uses straight-line amortization and rounds amounts to nearest dollar).

(9) c) Defining funds as working capital ★, indicate which of the transactions generate funds (+), which use funds (-) and which have no effect (0) on funds.

Transaction	+; -; or 0
i) Amortization of patents	________
ii) Amortization of bond premium	________
iii) Decrease in long-term liabilities	________
iv) Increase in accrued wages payable	________
v) Increase in trade accounts receivable	________
vi) Write-off of an account receivable against the allowance account	________
vii) Disposal of a plant asset at a loss	________
viii) Issue of a stock dividend	________
ix) Declaration of a cash dividend for payment in the next fiscal period	________

★ Working Capital = Current Assets - Current Liabilities.

32 Q. 3.

(12) a) The Westminster Company guarantees its products against defects that are detected during the first year after the products are delivered to customers. Past experience indicates that the cost of correcting any such defects averages 2% of sales. The following information is available for the year 198A.

1. Opening balance of the "Liability Under Product Guarantees" account, $5,000.
2. Sales for the year $600,000, all on account; collections of accounts receivable, $560,000.
3. Cash expenditures made to correct defects reported by customers during the year, $10,600.

Required:

i) Prepare all the entries affecting the "Liability Under Product Guarantees" account, as a result of the above information.
ii) What amount should be reported as a liability on the balance sheet at the end of the year?
iii) Does the balance of the "Liability Under Product Guarantees" account, represent a "real" liability?

(6) b) Espanola Company built a plant in Northern Ontario for which it received a 25% government assistance. The plant was completed early in January at a cost of $600,000. The plant was to be depreciated over a 20-year useful life on a straight-line basis with no residual value.

Required:

Give the entries for depreciation using the two alternative methods of accounting for government assistance related to capital expenditures.

(Continued)

(14) c) Your new client, Nu-Mode Company, is being audited for the first time. In the course of your examination, you encounter in the ledger, an account titled "Intangibles" which is essentially as below:

Intangibles

July 2, 198A Goodwill	10,000	Dec. 31, 198B Amortization	500
Jan. 2, 198B Patent	8,500	Dec. 31, 198C Amortization	4,000
May 1, 198C R and D	19,200		
June 30, 198C Bond discount	6,000		

By tracing entries to the journal and other supporting documents, you ascertain the following facts:

i) The July 2, 198A, entry was to recognize Nu-Mode's "superior" earning power. While other companies in the field were earning a 12% return on assets Nu-Mode earned 15% on assets in each of the last three years. The entry was:

Intangibles — goodwill	10,000	
Retained earnings		10,000

ii) The Jan. 198B entry was to recognize the purchase of a recently developed patent which is being amortized over its legal life. The economic life is expected to be the same.

iii) The Dec. 31, 198B Amortization was debited to Amortization expense and credited to Intangibles-patent.

iv) The R and D was made up of two items, $15,000 paid to Market Research Inc., for market studies conducted for Nu-Mode and $4,200 was spent on an advertising campaign as a result of the market research report. Sales since the beginning of the campaign rose sharply and were continuing strong at year-end.

v) The company issued $100,000 par value 10-year, 8%, bonds at 94; the bond discount was entered in the Intangibles account. The December 30 entry for payment of the semi-annual interest was a debit to Interest expense and a credit to Cash for $4000.

vi) Amortization on Dec. 31, 198C was as follows:

R and D amortized over 4 years	$3,200
Patent (see (ii) above)	500
Bond discount amortized over 10 years	300
	$4,000

Amortization expense was debited for the $4000.

Required:

Make the necessary correcting entries on Nu-Mode's books as of Dec. 31, 198C, on the assumption the books have been adjusted but not closed for the year as of that date.

20 Q. 4. The following data relate to Interprovincial Company (the Company uses the net method to record purchases):

a) Merchandise inventory on hand January 1, 19A valued at the lower of cost or replacement, $100,000.

b) During the year purchased merchandise for resale at $200,000 on credit terms, 2/10, n/30. $1,000 of the available discounts were lost through negligence.

c) Paid freight on merchandised purchased $8,000.

d) Damaged merchandise with an invoice price of $4,000 was returned to the supplier. A cash refund for the net price was received. This merchandise was part of the purchase in (b) above.

e) An allowance of $2,750 was granted customers because of unsatisfactory merchandise. The merchandise cost Interprovincial $2,000. Cheques were issued to the several customers. This merchandise was not returned by Interprovincial to its supplier.

f) The ending inventory (physical count) was $80,000 at cost and $76,000 at replacement cost. Excluded from the ending inventory was a shipment for $8,000 (equal to replacement cost). The shipment was in transit, f.o.b. shipping point at December 31, 19A. The invoice was recorded as part of the total purchases (b) above.

Required:

i) Prepare the necessary journal entries for the above transactions (omit narratives and assume the company uses periodic inventory system).

ii) Prepare the necessary closing entry or entries based on the data provided above.

iii) What was the cost of goods sold?

iv) If the company had used the gross method to record purchases the cost of goods sold would be $________ .

100

END OF EXAMINATION

CANADIAN CERTIFIED GENERAL ACCOUNTANTS' ASSOCIATION
ACCOUNTING 211 EXAMINATION
JANUARY 1980
EXAMINER'S COMMENTS

General

The common feature was that parts of the examination were extremely well answered while other parts were very poorly done.

Specific

Q.1 The question was extremely well done. Loss of marks in part (a) was for identifying the expenditure as extraordinary. In part (c) loss of marks was for not identifying the revenue principle and the transaction as a prior period adjustment. A number of students also failed to provide the correct entry.

Q.2 Part (a) was handled well except for section (iii) where a number of students had difficulty in calculating the amount of Bond Discount. Part (b), no apparent difficulty. Part (c) was answered very poorly. The students did not appear to have sufficient knowledge of the area.

Q.3 (a) Many students thought the beginning balance of $5,000 was not required since the *warranty year* to which the amount related had expired. Students confused real, estimated, and contingent liability. Many thought these classifications are mutually exclusive and collectively exhaustive. Students demonstrated difficulty in judging that the amount is estimated but the liability is real, although there is not specific entity to which the firm is liable.

(b) Most students could not come up with the entry:

Deferred government assistance	7500	
Government assistance realized		7500

Many adjusted depreciation expense (credit) or accumulated depreciation (debit), some thought it was unearned revenue, now earned.

(c) Many students found this part difficult since all amortization amounts were correctly recorded and, therefore, nothing seemed to be apparently wrong. Most students corrected goodwill entry and expensed research costs.

Q.4 The question was very poorly done. Most students either did not do part (ii) or confused periodic inventory and perpetual inventory systems. The question specified periodic inventory system.

CANADIAN CERTIFIED GENERAL ACCOUNTANTS' ASSOCIATION
ACCOUNTING 211 EXAMINATION
JANUARY, 1980
SUGGESTED SOLUTIONS

Marks | Time: 3 Hours

24 Q. 1.

a) This is a violation of the matching principle. Since the floods appear to be usual and frequent, the loss should be reported as an expense. It is neither a prior period adjustment nor an extraordinary item.

Repair expense-flood damage	8,900	
Cash		8,900

b) This is a violation of the cost and revenue principles. The cost of the asset is $65,000 and there is no revenue involved.

Fixed asset-warehouse	65,000	
Cash		65,000

c) This is a violation of the cost and matching principles. Interest is a cost of borrowing money and does not constitute an amount that increases the cost of the asset.

Note payable	60,000	
Interest expense	7,200	
Cash		67,200

d) This is a violation of the revenue principle. This is a prior period adjustment.

Cash	30,000	
Prior period adjustment (retained earnings)		30,000

24 Q. 2.

(10)	a)	(i)	$37,689 represents the present value of the $100,000 due in 10 years discounted at 5% semiannually (6 months periods).		
			$49,849 represents the present value of the annuity of $4,000 to be received each six month period for 20 periods discounted at 5% semiannually.		
		(ii)	Cash	87,538	
			Bond discount	12,462	
			Bonds payable		100,000
		(iii)	Interest expense	4,377★	
			Bond discount		377
			Cash		4,000
			★ $87,538 × 5% = $4,376.90 rounded to $4,377.		
(5)	b)	(i)	Investment in Crown Derby bonds	8,754★	
			Cash		8,754
			★ Rounded from $8,753.80		
		(ii)	Investment in Crown Derby bonds	62	
			Cash	400	
			Interest revenue		462
			Note: Alternative answer:		
		(i)	Investment in Crown Derby bonds	10,000	
			Discount on investment		1,246
			Cash		8,754
		(ii)	Discount on investment	62	
			Cash	400	
			Interest revenue		462

(9)	c)	(i)	+
		(ii)	−
		(iii)	−
		(iv)	0
		(v)	0
		(vi)	0
		(vii)	+
		(viii)	0
		(ix)	−

Page 2 of 4

32 Q. 3.

(12)	a)	(i)	Product guarantee expense	12,000	
			Liability under product guarantees		12,000
			Liability under product guarantees	10,600	
			Cash		10,600
		(ii)	$6,400		
		(iii)	Yes, the guarantee is an expense of selling the product and the balance of The Liability Under Product Guarantees represents the estimate of claims that will be made by the customers to correct defective products still covered by the guarantee on the balance sheet date.		
(6)	b)	(i)	Assuming government assistance is deducted from the related asset:		
			Depreciation expense	22,500	
			Accumulated depreciation		22,500
		(ii)	Assuming government assistance is deferred and amortized:		
			Depreciation expense	30,000	
			Accumulated depreciation		30,000
			Deferred government assistance	7,500	
			Government assistance realized		7,500
(14)	c)	(i)	Prior period adjustment (retained earnings)	10,000	
			Intangibles		10,000
		(ii)	Patent	8,000	
			Intangibles		8,000
		(iii)	No entry necessary.		
		(iv)	Marketing expenses	19,200	
			Intangibles		19,200
		(v)	Intangibles	4,000	
			Amortization expense		4,000
			Interest expense	300	
			Bond discount		300
			Bond discount	6,000	
			Intangibles		6,000
			Patent amortization expense	500	
			Patent		500

20 Q. 4.

(6)	i)	a)	No entry		
		b)	Merchandise purchases	196,000	
			Accounts payable		196,000
			Accounts payable	196,000	
			Purchase discounts lost	1,000	
			Cash		197,000
		c)	Freight-in	8,000	
			Cash		8,000
		d)	Cash	3,920	
			Purchase returns allowances		3,920
		e)	Sales returns and allowances	2,750	
			Cash		2,750
(8)	ii)		Income summary	304,000	
			Inventory		100,000
			Merchandise purchases		196,000
			Freight-in		8,000
			Inventory	84,000	
			Purchase returns and allowances	3,920	
			Income summary		87,920
			Income summary	2,750	
			Sales returns and allowances		2,750
(3)	iii)		$216,080.		
(3)	iv)		$217,080.		

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END OF SOLUTIONS

CANADIAN CERTIFIED GENERAL ACCOUNTANTS' ASSOCIATION
ACCOUNTING 211 EXAMINATION
MARCH, 1980

Marks | Time: 3 Hou

20 Q. 1. Listed below are a number of transactions that are reported on annual financial statements

Required:

For each item, you are to indicate in which statement the item is reported and the nature of tl item. (Use the format indicated after the listing of transactions).

a) Damages paid as a result of a lawsuit by a customer injured on the company's premis while taking delivery of an order; the litigation covered three years.

b) Gain on the expropriation of a plant in a foreign country.

c) Adjusted annual amortization charges as a result of current information that the life of patent will be shortened as a result of development by a competitor.

d) As a result of the bankruptcy of a major customer, 15% of the accounts receivable are no deemed uncollectible; the allowance for doubtful accounts balance at the beginning of t year stood at 5% of accounts receivable.

e) Estimated warranties payable.

f) Adjustment due to failure to capitalize purchase of equipment.The purchase of t equipment was two years ago.

g) Cash dividends declared but not yet paid.

h) Gain on sale of one of a number of stamping machines.

i) Loss due to a flood not covered by insurance was recognized and payment for repairs mac

j) A significant bonus was paid to employees for the excellence of performance during t year.

In answering this question, use the following format.

Transaction	Identification of statement in which transaction is reported.	Nature of item and how reported

for example an accounting error transaction (z)

(z)	Statement of Retained Earnings	Accounting error reported as prior peri adjustment resulting in a restatement of opening balance of retained earnings.

35 Q. 2. The Great Western Company (a partnership) produces a single product at a cost of $10 each which is paid in cash when the unit is produced. Selling and administrative expenses of $5 per unit are paid at the time of shipment. The sales price is $16 per unit; all sales are on account with the customer giving Great Western a post-dated cheque for the amount of the sale. The company expects no customer defaults nor any additional costs related to the cashing of the cheques.

Production and shipment of products was as follows:

	Production (units)	Shipment (units)
198A	200,000	150,000
198B	160,000	180,000

In 198A Great Western cashed $2,000,000 of the post-dated cheques and in 198B, $2,960,000.

Required:

a) Determine the amount of net income (show calculations in income statement form) that would be reported for each of these two years if:

(i) Revenue and expense are recognized at the time of production.

(ii) Revenue and expense are recognized at the time of shipment.

(iii) Revenue and expense recognized at the time of cashing of the post-dated cheques.

b) Would the current asset total shown on the December 31, 198B balance sheet be affected by the choice among the three recognition methods? If yes, which method would give the highest current asset total and why?

c) Since selling and administrative expenses are paid at the time of shipment and in the income statement these expenses are recognized on production basis (i) above and the cash basis (iii) above, what entries would be made (both years) to recognize the expense, the outflow of cash and the difference between the two?

12 Q. 3. The Van-Sask Company began business on January 2, 198A selling farm implements, with a two-year warranty against defects. Based on the experience of other similar distributors, the estimated warranty costs related to the dollar of sales are: year of sale ½% of sales; second year 2½% of sales. Sales and actual warranty expenditures for 198A, 198B and 198C were:

	Sales	Actual warranty expenditures
198A	$200,000	$ 800
198B	260,000	6,000
198C	300,000	9,400

Required:

Assuming that Van-Sask accounted on the accrual basis, give the entries that were made on the books for **each of the three** years relating to:

a) (i) Estimated warranty costs

(ii) Actual expenditures

b) What amount should be reported as a liability on the balance sheet at the end of each year?

Page 2 of 3

33 Q. 4. Answer the following independent questions.

(4) a) What is the purpose of the statement of changes in financial position? What is meant by all-resources concept?

(5) b) Digby Corporation reported the following:

Net income	$61,000
Income before extraordinary items	67,100

An analysis of the share capital account indicated the following:

Shares outstanding at beginning of year	25,000
Shares issued as stock dividend on September 1	3,000
Shares issued for cash on July 2	5,000

Required:

Determine earnings per share.

(4) c) An investor purchased shares of P.Q. Corporation as follows:

January 3, 100 shares @ $28.25 (including brokerage)
May 18, 150 shares @ $32 (including brokerage)
September 21, 250 shares @ $30 (including brokerage)

December 1, received 10% stock dividend.

On December 15 the investor sold at $31 net, 200 of the shares.

Required:

Prepare the December 15 journal entry.

(10) d) On January 1, 198A the Maritime Company purchased a crane to lift pleasure boats out of the water. The crane was listed at $28,150, however, the manufacturer was offering a cash discount of $3,150. Maritime was short on cash and was able to work-out the following terms:

Cash payment on March 31, $10,000 plus a non-interest bearing note with a face value of $18,150 due on December 31, 198B.

Required:

(i) Entry of January 1, 198A

(ii) Entry of December 31, 198A (end of company's fiscal year) to recognize interest expense applicable to 198A. Assume a 10% annual rate of compound interest.

(iii) Entry of December 31, 198B to record payment of the note.

(5) e) The Lower Townships Company had an old machine that originally cost $24,000 and has accumulated depreciation to date of $16,000. The old machine was exchanged for a new compact model that had a firm cash price of $6,000. The Lower Townships Company received a cash difference of $800 on exchange.

Required:

Give the entry to record the exchange (loss or gain is deemed material).

(5) f) Laurentian Company bought a patent on January 2, 198A for $13,600. For the first four years, it was amortized on the assumption that the total useful life would be eight years. At the start of the fifth year, it was determined six years would be the probable total life.

Required:

Prepare the amortization entry at the end of the fifth year.

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END OF EXAMINATION

CANADIAN CERTIFIED GENERAL ACCOUNTANTS' ASSOCIATION
ACCOUNTING 211 EXAMINATION
MARCH, 1980
EXAMINER'S COMMENTS

Specific

Q.1 Most students could not clearly identify change in estimate (items (c) and (d)). On the other hand, most students identified prior period adjustments and extraordinary items. It is important to note that many students seem to consider that if an item is material, it is an extraordinary item. Many others thought that if it was unusual, it would qualify as an extraordinary item.

Q.2 Most students had little difficulty in determining net income. A significant number did not know or identified the wrong method in part (b). Part (c) was poorly done by many students.

Q.3 Many students were incorrectly accruing warranty costs. A significant number thought that the warranty applies to the first two years and no warranty existed at the beginning of the third year. Too many students do not know the difference between expense and expenditure and between expense and cost.

Q.4 This question was poorly answered, especially parts (a), (b), (c) and (d). Some students did know the purpose of the statement of changes in financial position. In part (b) many students did not properly calculate the weighted average of shares outstanding and the treatment of stock dividends in the calculation. In part (c) a significant number of students did not take into consideration the stock dividend. In part (d) many students missed the point that the note was non-interest bearing.

CANADIAN CERTIFIED GENERAL ACCOUNTANTS' ASSOCIATION
ACCOUNTING 211 EXAMINATION
MARCH, 1980
SUGGESTED SOLUTIONS

Marks **Time: 3 Hour**

20 Q. 1.

Transaction		Identification of Statement in which transaction is reported	Nature of item and how reporte
a)		Statement of Retained Earnings	Prior period adjustment re quiring restatement of openin balance of retained earnings
b)		Income Statement	Extraordinary item with dis closure of applicable incom tax.
c)		Income Statement	Change in estimate reporte as current period expense wit proper identification.
d)		Income Statement	Change in estimate reported a current period expense proper identified.
e)		Balance Sheet	Normally classified as a curre liability.
f)		Statement of Retained Earnings	Accounting error reported a prior period adjustment r quiring restatement of openin balance of retained earnings.
g)	(i)	Statement of Retained Earnings	Deduction to retained earning
	(ii)	Balance Sheet	Current liability.
h)		Income Statement	Current period item proper identified.
i)		Income Statement	Extraordinary item with di closure of applicable incom tax.
j)		Income Statement	Expense of current period.

35 Q. 2. (a)

	Production Basis	Shipment Basis	Cash Basis
198A			
Revenues	$3,200,000	$2,400,000	$2,000,000
Cost of goods sold	2,000,000	1,500,000	1,250,000
Gross margin	$1,200,000	$ 900,000	$ 750,000
Selling and administrative expenses	1,000,000	750,000	625,000
Net income	$ 200,000	$ 150,000	$ 125,000
198B			
Revenues	$2,560,000	$2,880,000	$2,960,000
Cost of goods sold	1,600,000	1,800,000	1,850,000
Gross margin	$ 960,000	$1,080,000	$1,110,000
Selling and administrative expenses	800,000	900,000	925,000
Net income	$ 160,000	$ 180,000	$ 185,000

(b) Yes. The production basis so long as there are some units on hand. This is so because the units on hand on the production basis would not be carried as inventory at the lower value but as receivables at the higher value. The asset value would be higher by the difference in the reported net incomes in 198A and the cumulative difference in 198B.

(c) **Production basis:**

	198A (dr.)	198A (cr.)	198B (dr.)	198B (cr.)
Selling and administrative expense	1,000,000		800,000	
Deferred selling and administrative expense		250,000	100,000	
Cash		750,000		900,000
Cash basis:				
Selling and administrative expense	625,000		925,000	
Deferred selling and administrative expense	125,000			25,000
Cash		750,000		900,000

12 Q. 3.

	198A		198B		198C	
(a) (i) Warranty expense	6,000		7,800		9,000	
Estimated warranty liability		6,000		7,800		9,000
(ii) Estimated warranty liability	800		6,000		9,400	
Cash		800		6,000		9,400

(b) 198A - $5,200
198B - 7,000
198C - 6,600

33 Q. 4.

(4) (a) The purpose of the statement of changes in financial position is to report the financing and investing activities of a firm during a specified period of time. The all-resources concept means that all financing and investing activities must be reported in the statement regardless of whether funds were directly affected.

(5) (b) Earnings per share:

		Before extraordinary items	$2.20	
		Extraordinary loss	.20	
		Net income	$2.00	
(4)	(c)	Cash	6,200	
		Gain on sale of PQ shares		700
		Investment in PQ shares		5,500
(10)	(d)	**January 1, 198A**		
		Equipment-crane	25,000	
		Discount on notes payable	3,150	
		Accounts payable (Mar. 31)		10,000
		Notes payable		18,150
		December 31, 198A		
		Interest expense	1,650	
		Discount on notes payable		1,650
		December 31, 198B		
		Interest expense	1,500	
		Notes payable	18,150	
		Discount on notes payable		1,500
		Cash		18,150
(5)	(e)	Machine (new)	6,000	
		Accumulated depreciation	16,000	
		Cash	800	
		Loss on exchange of machine	1,200	
		Machine (old)		24,000
(5)	(f)	Amortization expense	3,400	
		Patent		3,400

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END OF SOLUTIONS

CANADIAN CERTIFIED GENERAL ACCOUNTANTS' ASSOCIATION
ACCOUNTING 211 EXAMINATION
JUNE, 1980

Marks | Time: 3 Hours

24 Q. 1. Fix-im Corporation was experiencing a bad year (profit wise). While doing an audit you discover the following:

a) The company purchased a machine on January 2, of the current year, with a list price of \$20,000 and a cash price of \$19,200. The following entry was made:

Machine	\$20,000	
Cash		19,200
Interest revenue		800

b) The machine in (a) above had an estimated useful life of 10 years and no residual value. Management decided to base depreciation on the machine on the profitability of the company, maximum of 2% of income before depreciation and income taxes. Consequently, the bookkeeper made the following entry:

Depreciation expense	800	
Accumulated depreciation-machine		800

c) Two delivery trucks were repaired (tune-up, new tires, brakes relined and front end realigned) at a cost of \$400. The following entry was made:

Fixed asset-truck	400	
Cash		400

d) A patent that cost \$20,400 ten years ago was being amortized over its legal life of 17 years. After ten years it had been amortized down to \$10,400. During the current year it was determined that the patent will cease to have economic value after next year (including the current year, two years of service life remained). Consequently, the bookkeeper, because of the change in estimate in the service life of the patent from 17 years to 12 years, made the following correcting entry followed by an entry to recognize amortization expense for the current year:

Retained earnings	7,000	
Patent		7,000
Amortization expense	1,700	
Patent		1,700

Required:

For each of the above situations, what, if any, accounting principles were violated and what adjustments, if any, are necessary in the accounts? **Make** the necessary entries to implement your decision in each case.

8 Q 2. Prairie Company purchased a machine on a time payment plan. The cash price was \$40,000. The terms were \$14,229 cash down payment plus three equal annual payments of \$10,000 which includes interest on the unpaid balance at 8% per annum.

Required:

a) Give the entry to record the purchase.

b) Give the entry to record the payment of the first installment of \$10,000.

c) Give the entry to record depreciation at the end of the first year assuming declining-balance method at double the straight-line rate. The machine is expected to have a 10-year service life and no residual value.

Note: The Present Value of Annuity of 1 (Ordinary) discounted at 8% is:

1 year hence	.92593
2 years hence	1.78326
3 years hence	2.57710
4 years hence	3.31213
5 years hence	3.99271

18 Q. 3. The following pretax amounts were taken from the adjusted trial balance of Great-West Corporation at December 31, 1979:

Sales revenue	\$360,000
Cost of goods sold	190,000
Selling and delivery expenses	70,000
Administrative expenses	50,000
Loss from major flood	20,000
Gain from expropriation of plant by foreign government	16,000
Additional depreciation charge on delivery equipment resulting from change in estimate of useful life	6,000
Damages collected from 1976 lawsuit	30,000
Cash dividends	10,000
Stock dividends (amount debited to retained earnings)	40,000
Retained earnings, January 1, 1979	260,000

Assume an average 30% corporate income tax rate on **all** items.

Required:

a) Prepare an income statement for the year ended December 31, 1979.

b) Prepare a statement of retained earnings for the year ended December 31, 1979.

18 Q. 4. The Owen Sound Tugboat Company Limited agreed to sell an ice-breaking tug to Great Lakes Marine Limited. The tug cost Owen Sound \$800,000 to construct and the company was negotiating a \$1.2 million price. Great Lakes was "strapped" for funds and offered to give Owen Sound \$1.3 million of its own 10%, 10-year bonds upon delivery of the tug. At the time, these bonds were marketable at 92. Owen Sound accepted the offer and delivered the tug on November 1, 1979 and received the \$1.3 million par value bonds dated the same day. Interest was payable semi-annually.

Required:

(11) a) Prepare the necessary journal entries on the books of Owen Sound **through April 1, 1980**, on the assumption that Owen Sound's fiscal year ends December 31 and the company uses straight-line amortizations and perpetual inventory system. Great Lakes was punctual on the interest payment.

(7) b) On February 1, 1982 Owen Sound decided to sell the Great Lakes bonds and successfully disposed of them at 93. Prepare appropriate journal entries.

32 Q. 5.

(10) a) The following figures appeared in the Allowance for Doubtful Accounts account during 198A:

Allowance for Doubtful Accounts

(1)	900	Bal. Y1	2,400
(2)	800	(3)	600
(4)	1,100		

An analysis of the Accounts Receivable indicates that on December 31, 198A $3,100 of the accounts are deemed to be uncollectible.

Required:

Reconstruct the entries for 198A and prepare the adjusting entry as of December 31.

(11) b) The February bank statement of Lakehead Company showed a February 28 cash balance of $12,400 and the books showed a balance of $13,912. During February, the bank charged back NSF cheques totalling $320 of which $180 had been redeposited by February 28. Deposit "in transit" on February 29 amounted to $3,100. Outstanding cheques on February 28 were $1,900 including a $500 cheque which the bank had certified on February 26. On February 14, the bank charged Lakehead's account for a $360 item which should have been charged to Lakeside Company; the bank did not detect the error. During February the bank collected a note for Lakehead, face amount of $600 and interest thereon of $30; the bank's service charge of $5 was deducted from the account. In checking the returned cheques it was discovered that a cheque in payment of an account was drawn for $329, however, in the Cheque Register the cheque was recorded as $392.

Required:

Prepare a reconciliation for February and the entries needed at February 28.

(5) c) As part of an agreement to locate its plant in Portage, the Provincial government agreed to assist the Three Wheel Auto Company in the financing of the plant. The agreement called for remittance to the company 20% of the construction cost. Early in January the company completed the construction of the plant at a cost of $100 million and received the provincial government's cheque for the agreed amount.

Required:

Assuming the plant is to be depreciated on a 20-year straight-line basis prepare the necessary journal entry(ies) at the end of the first year related to the capital expenditure.

(6) d) What is the CICA recommendation on accounting for research and development costs?

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END OF EXAMINATION

CANADIAN CERTIFIED GENERAL ACCOUNTANTS' ASSOCIATION
ACCOUNTING 211 EXAMINATION
JUNE, 1980
SUGGESTED SOLUTIONS

Marks

Time: 3 Hours

24 Q. 1. a) This is a violation of both the cost and revenue principles. The cost of the machine is its cash value at the time of purchase and the $800 is not revenue. The necessary entry to correct the accounts:

Interest revenue	800	
Machine		800

b) This is an incorrect application of both the matching and consistency principles. The machine should be depreciated over its estimated service life on a reasonable and consistent basis. The necessary entry to correct the accounts:

Depreciation expense	1,120	
Accumulated depreciation, machine		1,120

c) This is a violation of the matching principle and the definition of an asset. These are **ordinary** repairs and constitute an expense of the current period. The necessary entry to correct the accounts:

Delivery expense	400	
Fixed asset-truck		400

d) This is a change in estimate and **not** a correction of prior-period earnings. A change in estimate in the service life of the patent should be accounted for on a prospective basis and the balance of the patent amortized over the new estimate of life of two years. The necessary entries are:

Patent	7,000	
Retained earnings		7,000
Amortization expense	3,500	
Patent		3,500

8 Q. 2. (a)

Machine	40,000	
Cash		14,229
Notes payable ★		25,771

P.V. of note = 2.5771 × $10,000 = $25,771.

(b)

Notes payable	7,938	
Interest expense	2,062	
Cash		10,000

Interest expense may be calculated as 8% of 25,771 = $2,062
or $10,000 –[25,771 – (P.V. of note of two $10,000 payments)]=
$10,000 –[$25,771 – ($10,000 × 1.78326)]= $2,062

(c)

Depreciation expense	8,000	
Accumulated depreciation-machine		8,000

20% of $40,000.

★ As an alternative the notes payable could be recorded at $30,000 and notes discount of $4,229 and the entry in (b) would be:

Notes payable	10,000	
Interest expense	2,062	
Note discount		2,062
Cash		10,000

18 Q. 3. (a)

Great-West Corporation
Income Statement
For the Year Ended December 31, 1979.

Sales revenue			$360,000
Cost of goods sold			190,000
			$170,000
Expenses:			
Selling and delivery	$70,000		
Add: additional depreciation on delivery equipment	6,000	$76,000	
Administrative expenses		50,000	
Income tax expense		13,200	139,200
Income before extraordinary items			$ 30,800
Extraordinary items:			
Loss from major flood		$20,000	
Less: Gain on expropriation of foreign subsidiary	$16,000		
Applicable income tax	1,200	17,200	2,800
Net income			$ 28,000

(b)

Great-West Corporation
Statement of Retained Earnings
For the Year Ended December 31, 1979.

Retained earnings, January 1, 1979		$260,000
Add: Damages collected from 1976 lawsuit	$30,000	
Less: applicable income tax	9,000	21,000
Retained earnings as restated		$281,000
Add net income for the year		28,000
		$309,000
Deduct: Cash dividends	$10,000	
Stock dividends	40,000	50,000
Retained earnings December 31, 1979		$259,000

Page 2 of 5

18 Q. 4.

(11)	(a)	**Nov. 1, 1979**		
		Investment in Great Lakes bonds sales	1,196,000	
		Sales		1,196,000
		Cost of Goods sold	800,000	
		Inventory		800,000
		Dec. 31		
		Interest receivable	21,667	
		Investment in Great Lakes bonds	1,733	
		Interest revenue		23,400

Note: ★ An alternative solution is to record the investment at $1.3 million with a contra account of $104,000. Amortization would, of course, be of the contra account.

(7)	(b)	**Feb 1, 1982**		
		Interest receivable	10,833	
		Investment in Great Lakes bonds	867	
		Cash	1,241,500	
		Loss on disposal of Great Lakes bonds	10,400	
		Investment in Great Lakes bonds		1,219,400
		Interest receivable		32,500

Note: The note to part (a) is also applicable to part (b), however, the result would be the same.

Page 3 of 5

(10)	(a)	(1)	Allowance for doubtful accounts	900	
			Accounts receivable		900
		(2)	Allowance for doubtful accounts	800	
			Accounts receivable		800
		(3)	Accounts receivable	600	
			Allowance for doubtful accounts		600
		(4)	Allowance for doubtful accounts	1,100	
			Accounts receivable		1,100
		(5)	Bad debt expense	2,900	
			Allowance for doubtful accounts		2,900

(11) (b) Bank Reconciliation for the Month of February

Balance per bank		$12,400
Additions:		
Unrecorded deposits	$3,100	
Bank error	360	3,460
		$15,860
Deductions:		
Outstanding cheques		1,400
True cash balance		$14,460
Balance per books		$13,912
Additions:		
Collection of note	$ 600	
Collection of interest	30	
Error in recording cheque	63	693
		$14,605
Deductions:		
NSF cheques	$ 140	
Bank charges	5	145
True cash balance		$14,460

Cash	630	
Notes receivable		600
Interest revenue		30
Cash	63	
Accounts payable		63
Accounts receivable	140	
Cash		140
Bank charges	5	
Cash		5

(5) (c)

Depreciation expense	4,000,000	
Accumulated depreciation plant		4,000,000

or

Depreciation expense	5,000,000	
Accumulated depreciation plant		5,000,000
Government plant assistance grant	1,000,000	
Government assistance realized		1,000,000

Page 4 of 5

(6) (d) (i) Research costs should be charged as an expense of the period in which they are incurred.

(ii) Development costs should be charged as an expense of the period in which they are incurred except if certain criteria is met for deferment, the development costs should be deferred to the extent that recovery of such costs is reasonably assured.

100

END OF SOLUTIONS

CANADIAN CERTIFIED GENERAL ACCOUNTANTS' ASSOCIATION
ACCOUNTING 221 EXAMINATION
JANUARY, 1980

Marks

Time: 3 Hours

16 Q. 1. Shaky Company was experiencing a poor year and in order to minimize the expected loss the accountant recorded certain transactions as indicated below.

Required:

Determine for each transaction:

i) What accounting principle was violated (if any)
ii) explain the nature of each violation, and
iii) in each instance indicate the correct accounting treatment.

(4) a) The company decided to use the direct write-off of bad debts and closed out the balance of the allowance for Doubtful Accounts account as follows:

Allowance for doubtful accounts	650	
Revenue from unrealized bad debts		650

(4) (b) The company purchased a machine for $30,000 paying $12,000 cash and giving a 5-year note for the balance. The machine was expected to have a service life of 10 years (no salvage value) and depreciation was recognized for 6 months as follows:

Depreciation expense	600	
Accumulated depreciation		600

The reason for the above entry was that the company had an "equity" in the machine of $12,000 and that is the amount that it felt should be depreciated.

(4) c) Regular repairs were performed on fixed assets and the entry to record the expenditure was:

Fixed asset	1,400	
Cash		1,400

(4) d) An order for merchandise was received on December 27, 1978, accompanied by a $2,000 cheque. The company's fiscal year end is December 31. The goods were to be shipped the middle of January. The transaction was recorded:

Cash	2,000	
Sales revenue		2,000

15 Q. 2. In order to make a line of dish washing machines more attractive to the customers, New-Way introduced a three-year warranty policy against defects. Reliability studies indicate that for each machine sold, cost of repairs will average $10. The timing of the repairs per machine are expected to be $2 in the first year of sales, $3 in the second year after sale and $5 in the third year after sale. Sales and actual warranty expenditures for the three years since introduction of the warranty plan were:

	Machines Sold	Actual Warranty Expenditures
1976	900	$1,000
1977	1,000	4,800
1978	1,200	9,700

Required:

a) Give journal entries relative to warranty cost for each of the three years.

b) What amount should be reported as a liability on the balance sheet at the end of each year?

9 Q. 3. Yukon Merchandising company had a beginning inventory, valued at the lower of cost or replacement, of $20,000. During the fiscal period purchases were $100,000 subject to a 2% discount if paid within the discount period. Because of negligence, $500 of the available discounts were not taken. At the end of the period a physical count of inventory was taken and the value was determined as $18,000 (lower of cost or replacement). Not included in the physical count was a shipment in transit which was shipped f.o.b. shipping point. The invoice for the goods in transit ($6,000 gross) was recorded in the books and reflected in the $100,000 amount above.

Assume that the value of the goods in transit approximated their replacement value.

Required:

Prepare the cost of goods sold section of the income statement assuming that:

a) purchases were recorded at net and

b) purchases were recorded at gross.

16 Q. 4. Select the best answer for each of the following:

a) Net income provides a working capital amount that is usually:

(i) equal to the amount of net income.
(ii) greater than the amount of net income.
(iii) less than the amount of net income.

b) The trade of a long-term investment for a tract of land is reported on the statement of changes in financial position if it is prepared on:

(i) working capital basis.
(ii) cash basis.
(iii) both of the above.
(iv) none of the above.

c) Convertible bonds are turned in and the holders receive for payment common shares of the issuing corporation. This transaction is reported on the statement of changes in financial position if it is prepared on:

(i) working capital basis.
(ii) cash basis.
(iii) both of the above.
(iv) none of the above.

d) Amortization of a patent affects both working capital and cash.

(i) True.
(ii) False.

e) If the classification of a long-term debt is changed to current liabilities during the current period (because the maturity date is only six months from the end of the current year), the statement of changes in financial position would be affected if prepared on:

(i) Working capital basis: Yes ______ No ______
(ii) Cash basis: Yes ______ No ______

f) Does the writing off of a bad debt (allowance method used) affect either the amount of (i) cash or (ii) working capital on the statement of changes in financial position?

(i) Cash Yes ______ No ______
(ii) Working capital Yes ______ No ______

g) A $25,000 deposit with a trustee of a bond sinking fund would be reported as a use on a statement of changes in financial position prepared on:

(i) Working capital basis: Yes ______ No ______
(ii) Cash basis: Yes ______ No ______

h) A purchase at beginning of the fiscal year of a fixed asset by giving four notes payable due in 6-month intervals from date of purchase would be reported as a use on a statement of changes in financial position at end of the fiscal year prepared on:

(i) Working capital basis: Yes ______ No ______
(ii) Cash basis: Yes ______ No ______

18 Q. 5.

(4) a) If prices rise steadily over an extended period of time, indicate whether the following items would give rise to a purchasing power gain, a purchasing power loss, or neither purchasing power gain nor loss.

(i) Owning land. Gain ______ Loss ______ Neither ______
(ii) Maintaining a balance in a chequing account. Gain ______ Loss ______ Neither ______
(iii) Amortizing goodwill. Gain ______ Loss ______ Neither ______
(iv) Owing bonds payable. Gain ______ Loss ______ Neither ______

(4) b) On December 31, 1979, Northwest Company purchased a machine required for continuation of its operation. The company was experiencing a cash shortage and the vendor agreed to accept $100,000, par value 10%, 5-year bonds of Northwest. Interest was payable annually. The bonds could have been sold to yield 12%.

Using the information below, record the acquisition of the machine and the issuance of the bonds.

Periods Hence	**P.V. at at 10%**	**Of $1 at 12%**	**P.V. at at 10%**	**Of $1 Received Periodically at 12%**
1	0.909	0.893	0.909	0.893
2	0.826	0.797	1.736	1.690
3	0.751	0.712	2.487	2.402
4	0.683	0.636	3.170	3.037
5	0.621	0.567	3.791	3.605

(4) c) Record the December 31, 1980 entry to recognize interest expense and payment (use interest method).

(2) d) When an established company adopts a pension plan, the costs related to past services of employees should be charged to which of these?

Operations of current and future periods.
Operations of prior periods.
Operations of the current period.
Retained earnings.

(4) e) (i) Ajax Corporation has an accounts receivable turnover of 15. What would be the age of the receivables?

(ii) The Corporation has an inventory turnover of 9. What would be the average number of days of supply?

15 Q. 6. During January, 1978, Prairie Company purchased 1,000 of the outstanding 5,000 shares of B.C. Limited at $26 per share. At that date the following data was available:

	B.C. Limited	
	At book value	**At fair market value**
Assets not subject to depreciation ...	$ 80,000	$85,000
Assets subject to depreciation (ten-year remaining life)	50,000	56,000
	$130,000	
Liabilities	$ 20,000	
Share capital, common	75,000	
Retained earnings	35,000	
	$130,000	

At the end of 1978, B.C. Limited reported a net income of $18,000 and paid a cash dividend of $7,000.

Required:

(12) a) Assuming Prairie Company used the Equity Method to account for this investment prepare the necessary entries pertaining to the investment at the **end of 1978**. (Assume goodwill is amortized over a ten-year period).

(3) b) What is the difference in amount that Prairie Company recognized as investment revenue under the equity method, and the amount it would have recognized had the cost method been used?

11 Q. 7. The following amounts are taken from the accounts of Portage Company Limited at December 31,1978:

Sales revenue	$420,000
Cost of goods sold	220,000
Operating expenses	88,000
Extraordinary loss on sale of foreign subsidiary	(16,800)
Prior period adjustment, collection of law suit	11,600
Dividends	24,000
Share capital, common 60,000 shares ★	615,000

★ 12,000 of the shares were issued on May 1, 1978.

Assume that income, regardless the source, is subject to a 40% income tax rate.

Required:

Compute the earnings per share.

100

END OF EXAMINATION

CANADIAN CERTIFIED GENERAL ACCOUNTANTS' ASSOCIATION
ACCOUNTING 221 EXAMINATION
JANUARY 1980
EXAMINER'S COMMENTS

General

A good portion of the examination was patterned on previous ones, performance however was disappointing.

Specific

Q.1 Very well answered.

Q.2 This question was either very well answered or the student lacked the basic knowledge to distinguish between an expense and liability, and consequently, performed poorly.

Q.3 Students are apparently better acquainted with the gross than the net method of recording purchases. Marks tended to run from 50% up.

Q.4 This question was well done.

Q.5 Some students were apparently guessing on part (a). Part (b) was straightforward yet few answered it correctly. Part (c) was also poorly done.

Q.6 Students either knew the equity method (in which case performed well) or demonstrated a complete lack of knowledge in this area.

Q.7 Many students ended up with a calculation of a weighted average of shares outstanding that exceeded the 60,000 given as outstanding at year end. A number failed to put together a rather simple income statement.

CANADIAN CERTIFIED GENERAL ACCOUNTANTS' ASSOCIATION
ACCOUNTING 221 EXAMINATION
JANUARY, 1980
SUGGESTED SOLUTIONS

Marks Time: 3 Hours

16 Q. 1.

(4) a) The matching principle was violated. Bad debt expenses should be recognized in the accounting period revenue that gave rise to the expense was recognized. The entry should be reversed and an estimate of bad debts made and an adjusting entry made to recognize the bad debt expense applicable to the current period. Other principles violated - consistency and revenue.

(4) b) The matching principle was violated — depreciation expense applicable to the current period was understated. The company had ownership and use of the asset and the entry should have been:

Depreciation expense	1,500	
Accumulated depreciation		1,500

(4) c) This is a violation of the matching principle and definition of an asset. These are ordinary repairs and constitute an expense of the current period, not an increase of the asset value. The entry should have been:

Repair expense	1,400	
Cash		1,400

(4) d) The revenue principle is violated and a liability is understated. Revenue is not recognized until the sale is completed which is at a point title to the goods passes to the buyer. The entry should have been:

Cash	2,000	
Advances from customers		2,000

Other principle violated - matching.

15 Q. 2.

a)

	1976		1977		1978	
To record warranty expense at $10 per machine:						
Warranty expense	9,000		10,000		12,000	
Estimated warranty liability		9,000		10,000		12,000
To record actual expenditures:						
Estimated warranty liability	1,000		4,800		9,700	
Cash		1,000		4,800		9,700

b) 1976 = $ 8,000
1977 = 13,200
1978 = 15,500

9 Q. 3.

a)

Beginning inventory		$ 20,000
Purchases (net)		98,000
		$118,000
Less ending inventory		23,880
Cost of goods sold		$ 94,120

b)

Beginning inventory		$ 20,000
Purchases	$100,000	
Less: Purchase discounts	1,500	98,500
		$118,500
Less:ending inventory		24,000
		$ 94,500

16 Q. 4.

a) (ii)

b) (iii)

c) (iii)

d) (i)

e) Yes
No

f) No
No

g) Yes
Yes

h) Yes
Yes

18 Q. 5.

(4) a) i) Neither gain nor loss.
ii) Purchasing power loss.
iii) Neither gain nor loss.
iv) Purchasing power gain.

(4)	b)	Machine	92,750	
		Bond discount	7,250	
		Bonds payable		100,000
(4)	c)	Interest expense	11,130	
		Bond discount		1,130
		Cash		10,000

(2) d) Operations of current and future periods.

(4) e) i) Ajax Corporation's receivables are on the average 24.3 days old before they are collected.

ii) The average number of days of supply would be 40.6 days.

PAGE 3 OF 5

15 Q. 6.

(12) a)

Investment in B.C. shares	3,600	
Investment revenue		3,600
Investment revenue	120	
Investment in B.C. shares		120

To recognize depreciation on the excess of fair market value over book value of depreciable assets. $56,000 — $50,000 × 20% ÷ 10 years.

Investment revenue	180	
Investment in B.C. shares		180

To amortize goodwill computed as:

Cost of 20% interest	$26,000
Book value purchased	22,000
	$ 4,000
Excess of fair market value over book value of 20% of assets purchased — 20% of $11,000.	2,200
Goodwill purchased	$ 1,800

Cash	1,400	
Investment in B.C. shares		1,400

(3) b)

Investment revenue under equity method —	$3,300
Investment revenue under cost method	1,400
Difference	$1,900

11 Q. 7. Income before extraordinary items:

$420,000 — $220,000 — $88,000	$112,000
Less 40% income tax	44,800
	$ 67,200

Extraordinary loss	$ 16,800
Less: Tax savings	6,720
Loss	$ 10,080
Net Income	$ 57,120

Average number of shares outstanding:

48,000 + $^{2}/_{3}$ of 12,000 = 56,000 shares

Earnings per share:

Before extraordinary item — $67,200/56,000 =	$1.20
Extraordinary loss $10,080/56,000 =	(18)
Net income	$1.02

100

END OF SOLUTIONS

PAGE 5 OF 5

CANADIAN CERTIFIED GENERAL ACCOUNTANTS' ASSOCIATION
ACCOUNTING 222 EXAMINATION
JANUARY, 1980

Marks

Time: 3 Hours

20 Q. 1. On January 1, year 1, Company P purchased 90% of the outstanding common shares of Company S for $150,000. At that date, Company S condensed balance sheet and fair values were:

	Book Value	Fair Value
Cash	$10,000	$10,000
Land	20,000	30,000
Building (net)	20,000	25,000
	$50,000	
Liabilities	$10,000	$10,000
Common shares	10,000	
Retained Earnings	30,000	
	$50,000	

Assume a 10 year amortization period for any depreciable assets excess and a 20 year period for any goodwill.

Required:

(4) (a) Would the equity method of accounting for long-term investments be appropriate for financial reporting purposes? Explain.

(8) (b) Assume the following information regarding net income and dividends of Company S:

Year	Net Income	Dividends
1	$10,000	$2,000
2	12,000	2,000
3	9,000	2,000
4	(10,000)	2,000★
5	10,000	26,000

★ The year 4 dividend was a 20% stock dividend.

Calculate the balance in the Investment account in Company P's books at the end of year 5, assuming that Company P uses the equity method in its books.

(8) (c) Assume that Company P uses the cost method of accounting for its investment. Prepare journal entry or entries to reflect the information given previously for years 4 and 5.

20 Q. 2. A, B, and C, all wealthy individuals and good friends, have been in partnership for quite a number of years. All are near retirement and therefore have decided upon liquidation. The partners share profits/losses in a 3:2:1 ratio. The balance sheet before liquidation begins is:

Cash	$20,000	Accounts Payable	$15,000
Accounts Receivable	12,000	A Capital	30,000
Inventory	20,000	B Capital	12,000
Equipment	15,000	C Capital	10,000
	$67,000		$67,000

Details of the liquidation are:

(a) The accounts receivable was sold to a collection agency for $10,000.

(b) The inventory was sold to a competitor for 70% of book value.

(c) The equipment was to be sold to a dealer for $22,000. However, partner C decided to take it himself. The others agreed to this.

(d) The creditors were paid in full in time for a 2% discount to be taken. The partnership has been recording purchases at the net amount.

Required (show all calculations):

(5) (a) Define liquidation.

(10) (b) Prepare a **Balance Sheet** for the partnership which takes the above details into account (i.e., before any cash distribution to partners).

As an aid, you may wish to set up a schedule as follows:

Transaction	Cash	A/Rec.	Inv.	Equip.	A/Pay	A	B	C
Beg. Bal.	$20,000	$12,000	$20,000	$15,000	$15,000	$30,000	$12,000	$10,000
(a)								
(b)								
(c)								
(d)								
End. Bal.								

(5) (c) Prepare a journal entry to account for the final cash distribution to the partners. State any assumptions you make.

20 Q. 3. The comparative balance sheets for Delta Company as of December 31 follows:

	1978	1977
Cash	$ 6,000	$ 7,000
Accounts Receivable	4,000	5,000
Allowance for doubtful accounts	(1,000)	(500)
Inventory (LIFO)	12,000	11,000
Investment in X Co. (Equity)	13,000	10,000
Fixed Assets	40,000	30,000
Accumulated Depreciation	(10,000)	(8,000)
	$64,000	$54,500
Accounts Payable	$ 5,000	$ 7,000
Current portion Long-term Debt	6,000	6,000
Long-term Debt	10,000	16,000
Common Shares -- No Par	8,000	3,000
Retained Earnings	35,000	22,500
	$64,000	$54,500

The income statement for 1978 is:

Revenues	$55,000
Cost of goods sold	20,000
Gross margin	$35,000
Expenses	20,000
	$15,000

(Continued)

(Continued)
20 Q. 3.

Additional information:

(a) A fixed asset was purchased at the beginning of 1978. All other fixed assets were acquired at the beginning of 1970 when the company was organized. The 1978 addition has a 10-year life and no salvage value. Straight-line depreciation was used. No assets were disposed of.

(b) Long-term Debt was required to finance the original fixed asset purchase.

(c) A $500 account receivable was considered doubtful as of the beginning of 1978 and was credited to the Allowance account at that time.

(d) The investment in X Co. (80% owned) was acquired at the beginning of 1977. X Co. reported income of zero in 1977 and paid no dividends. In 1978, X Co. reported income of $5,000 and paid year-end dividends of $1,250. Income was earned evenly throughout the year. Delta acquired its investment at book value.

(e) Additional common shares were issued at the beginning of year, 1978.

(f) There was no ending inventory at year end 1976.

(g) An average rate is appropriate for all other items.

(h) Price index data:

Year	Beginning	Average	End
1970	100	108	110
1971	110	115	120
1972	120	122	125
1973	125	125	125
1974	125	127	130
1975	130	137	140
1976	140	150	152
1977	152	160	162
1978	162	170	175

Required: (Do any five of the following)

Calculate the following amounts adjusted to year end 1978 purchasing power. Round to the nearest dollar.

(a) Balance in the Investment in X account at December 31, 1978.

(b) Balance in the Inventory account at December 31, 1978.

(c) Cost of goods sold for 1978.

(d) Sales for 1978.

(e) Depreciation for 1978.

(f) Purchasing power gain/loss for 1978.

(g) Balance in the Long-term Debt *account* at December 31, 1978.

(h) Balance in the Allowance for doubtful accounts at December 31, 1977.

Note: Only five of the above are required for four marks each.

20 Q. 4. On January 1, year 1, Alpha Company purchased a machine for $175,000. It was estimated that the machine would have a useful life of 10 years and no residual value.

When the machine was purchased, it was charged to expense in error. The company uses straight-line depreciation for such assets. The average tax rate is 40%. As the income derived from this asset is not taxable, depreciation (capital cost) is not allowed for tax purposes.

At the end of year 10, it was found that the machine would most likely last another 5 years.

Required:

(10) (a) Assume that the books are closed and that the error was discovered at the end of year 5. Prepare a journal entry to adjust the accounts for year 5 using a retroactive application.

(5) (b) Assume the same facts given in (a). Prepare a journal entry for depreciation expense for year 6.

(5) (c) The realization that the machine would last another 5 years requires appropriate accounting action. If this is considered a change in estimate, what is the appropriate action in this case? Explain. Do not prepare a journal entry.

10 Q. 5. Kappa Company Ltd. purchased a piece of machinery at the beginning of 1975. Capital cost allowance rate is 20%. For accounting purposes, the company utilizes the productive output method of depreciation. The machinery is expected to have a productive life of 9,000 units output, cost $90,000 installed, and has an expected residual value of zero. Production during 1975 and 1976 was 2,000 and 3,000 units, respectively. Net income after taxes as reported for financial statement presentation was $82,500 a year for each of the two years. Assume an average tax rate of 45%.

Required:

Complete a tabulation for 1975 and 1976 as follows:

	1975	**1976**
Net income before tax		
Income tax		
Net income after tax		
Depreciation expense		
Capital cost allowance		
Taxable income		
Taxes payable		
Deferred taxes on balance sheet at year-end ★		

★ State whether this is a debit or credit balance. Show all computations.

10 Q. 6. Following is the balance sheet for Antioch Ltd. for years ended December 31, 1978 and 1979:

	1979	1978
Cash	$ 4,000	$25,000
Accounts Receivable (net)	5,000	9,000
Inventory	10,000	12,000
Investment in Subsidiary (Equity)	12,000	5,000
Fixed Assets (net)	25,000	30,000
	$56,000	$81,000

Accounts Payable	$ 6,000	$ 8,000
Common Shares (No Par)	45,000	40,000
Retained Earnings	5,000	33,000
	$56,000	$81,000

Additional information:

The subsidiary, 60% owned, reported net income of $20,000 in 1979.

Antioch Ltd. was unable to pay a cash dividend in 1979 and issued a stock dividend instead.

Antioch Ltd. purchased a fixed asset at the beginning of 1979. Estimated life 10 years, salvage value $2,000 and yearly straight line depreciation of $1,000.

Required:

Prepare in *good form* a statement of changes in financial position - cash basis. Include a separate schedule showing how you have computed cash flow from operations.

100

END OF EXAMINATION

PAGE 6 OF 6

CANADIAN CERTIFIED GENERAL ACCOUNTANTS' ASSOCIATION
ACCOUNTING 222 EXAMINATION
JANUARY 1980
EXAMINER'S COMMENTS

General

In general, the students were either well prepared or poorly prepared and this showed in the results. There were no major problem areas except for those students who were not well prepared. The number of students writing this first exam was small and therefore no specific problem areas were evident from the small sample.

Marks | Time: 3 Hours

20 Q. 1.

(4) (a) The equity method of accounting is appropriate when the investor owns a sufficient number of the outstanding voting shares of the investee company to exercise **significant influence** over the operating and financial activities of the investee. Usually this is between 20% and 50% ownership.

In this case, the appropriate method for financial reporting is **Consolidation**, although Company P could also use the equity method in its own books, since the investor has voting control.

(8) (b) Computation of Goodwill and Excesses:

Purchase price for 90%	$150,000
Book value 90%	36,000
Excess	$114,000
Land - 90% of $10,000	$ 9,000
Building - 90% of $5,000	4,500
Balance - goodwill	100,500
Total	$114,000

Write-off Building – $4,500 ÷ 10 years = $450/year
Write-off Goodwill – $100,500 ÷ 20 years = $5,025/year

Balance in account end of year 5 is:

$150,000 + .90($31,000) – .90($32,000) – 5($450) – 5($5,025) = $121,725

Note that the stock dividend in year 4 is ignored as no assets left Company S.

(8) (c) Year 4 – no entry for stock dividend
Year 5:

Cash	$23,400	
Dividend Income		$22,500
Investment in S		900

Since profits were $31,000 for 5 years and cash dividends were $32,000, a liquidating dividend results: 90% of $1,000 = $900. Note also that the stock dividend is not relevant.

20 Q. 2.

(5) (a) Liquidation: When a partnership is liquidated, its *business is ended*, the assets are *converted* into cash, the *creditors are paid*, the *remaining cash is distributed* to the partners, and the *partnership is dissolved.*

(10) (b) Liquidation transactions:

	Cash	A/Rec	Inv.	Equip.	A/Pay	A	B	C
Beg. Bal.	20,000	12,000	20,000	15,000	15,000	30,000	12,000	10,000
A/Rec	10,000	(12,000)				(1,000)	(667)	(333)
Inv.	14,000		(20,000)			(3,000)	(2,000)	(1,000)
Equip.				7,000 ★		3,500	2,333	1,167
				(22,000)				(22,000)
A/Pay	(15,000)				(15,000)			
End. Bal.	29,000	——	——	——	——	29,500	11,666	(12,166)

Balance Sheet (before distribution to partners)

Cash	$29,000	A	$29,500
		B	11,666
		C	(12,166)
			$29,000

★The equipment had a fair value of $22,000. The asset should be written up and the gain distributed to capital accounts.

(5) (c) The problem here is that partner C's account shows a debit balance. Since "all are wealthy individuals and good friends," we may assume that partner C would pay in cash to cancel his debit balance of $12,166. If this is the case, then the journal entry is:

	Dr.	Cr.
A Capital	$29,500	
B Capital	11,666	
Cash		$41,166

Cash available	$29,000
C contribution	12,166
	$41,166

However, if the student assumes that C will not contribute, then his deficit would be allocated to A and B in a 3:2 ratio:

	A	B	C
Balance before	29,500	11,666	(12,166)
Distribute deficit	(7,300)	(4,866)	12,166
Balance after	22,200	6,800	0

Journal entry is:

	Dr.	Cr.
A Capital	$22,200	
B Capital	6,800	
Cash		$29,000

Note that part (c) is dependent upon the capital balances shown by the student in part (b). Even if the balances are incorrect in part (b), the answer to part (c) will be based on this, and the student is not penalized twice for the original error.

20 Q. 3. **Note:** Only five required.

(4) (a) Balance in Investment account is $14,631, at December 31, 1978.

	Historical		GPL
Cost	$10,000	× 175/152 =	$11,513
Income 1978 (.80 × 5,000)	4,000	× 175/170 =	4,118
Less dividends 1978 (.80 × 1,250)	(1,000)	× 175/175 =	(1,000)
Balance end of 1978	$13,000		$14,631

PAGE 2 OF 4

(4) (b) Balance in inventory is $13,060, at December 31, 1978.

LIFO Basis

1977 layer	$11,000	× 175/160 =	$12,031★
1978 layer	1,000	× 175/170 =	1,029★
1978 balance	$12,000		$13,060

★ Assumes per instructions that purchases uniform, therefore, average is appropriate.

(4) (c) Cost of goods sold for 1978 is $20,589.

	Historical		GPL
Beginning Inventory	$11,000	× 175/160 =	$12,031
Purchases	21,000	× 175/170 =	21,618
Available	$32,000		$33,649
Ending Inventory	12,000	as above	13,060
Cost of goods sold	$20,000		$20,589

(4) (d) Sales for 1978 are $51,000 × 175/170 = $52,500 (Revenues include $4,000 from sub.)

(4) (e) Depreciation is $2,830, for 1978.

	Historical		GPL
1978 Asset $10,000 ÷ 10 =	$ 1,000	× 175/162 =	$ 1,080
Original assets	1,000	× 175/100 =	1,750
Increase in accumulated depreciation	$ 2,000		$ 2,830

(4) (f) Purchasing Power Gain is $1,526, for 1978.

	Historical (Net Monetary Liabilities)		GPL
Beginning balance	$ (17,500)	× 175/162 =	$ (18,904)
Revenues less investment income	51,000	× 175/170 =	52,500
Dividends from X Co.	1,000	× 175/175 =	1,000
Common share issue	5,000	× 175/162 =	5,401
Dividends	(2,500)	× 175/170 =	(2,574)
Purchase of asset	(10,000)	× 175/162 =	(10,802)
Expenses less depreciation	(18,000)	× 175/170 =	(18,529)
Purchases	(21,000)	× 175/170 =	(21,618)
Ending balance	(12,000)		($13,526)
		Gain	1,526
			($12,000)

(4) (g) Long-term Debt is $16,000 (monetary), i.e. current plus long term, at December 31,1978.

(4) (h) Allowance for doubtful accounts is $500 × $\frac{175}{162}$ = $540 at December 31, 1977.

PAGE 3 OF 4

20 Q. 4.

(10)	(a)	Machinery	$175,000	
		Retained Earnings		$87,500
		Accumulated Depreciation		87,500
		Accumulated Depreciation = $17,500 × 5 years		
(5)	(b)	Depreciation Expense	$17,500	
		Accumulated Depreciation		$17,500

(5) (c) Generally, a change in estimate is handled on a prospective basis. That is, the future periods will be affected. However, in this case, the asset is fully depreciated, so that if a prospective basis were used, no depreciation would be charged against income in years 11 through 15 -- although the asset would be in use. Perhaps in this case a retroactive adjustment would be more appropriate.

10 Q. 5.

	1975	1976
Net income before tax	$150,000	$150,000
Income tax	67,500	67,500
Net income after tax	82,500	82,500
Depreciation expense	20,000	30,000
Capital cost allowance	18,000	14,400
Taxable income	152,000	165,600
Taxes payable	68,400	74,520
Deferred taxes on balance sheet at year end ★	900 dr	7,920 dr

★ The balance is the aggregate difference between income tax on the income statement and taxes payable.

Proof of the ending balance

Total depreciation	$50,000	
Total CCA	32,400	
Difference	$17,600	× .45 = $7,920

Since the company has shown more depreciation on its income statement than capital cost on its tax return, the tax payable is greater than tax expense by $7,920. Thus, there is a debit balance in the account.

10 Q. 6.

Antioch Ltd.
Statement of Changes in Financial Position - Cash Basis
For the year ended December 31, 1979

(1)	Cash applied to purchase of Fixed Asset	$12,000
	Cash used by operations	9,000
	Decrease in cash during period	$21,000

Schedule of Cash from operations

(1)	Net loss	$(23,000)
(1)	Depreciation expense	17,000
(1)	Accounts Receivable decrease	4,000
(1)	Inventory decrease	2,000
(1)	Dividends from Subsidiary	5,000
(1)	Equity in income from Subsidiary	(12,000)
(1)	Accounts Payable decrease	(2,000)
	Cash used by operations	$ 9,000

(2) Marks allocation for form and presentation.

100

END OF SOLUTIONS

CANADIAN CERTIFIED GENERAL ACCOUNTANTS' ASSOCIATION
ACCOUNTING 222 EXAMINATION
MARCH, 1980

Marks | Time: 3 Hours

12 Q. 1. The balance sheet and the income statement of a partnership are like those of a single proprietor. However, one additional statement, that of the partners' capital accounts, is normally prepared.

Required:

(4) (a) In good form, prepare a typical statement of changes in capital accounts for a partnership consisting of three individuals. Do not include amounts.

(4) (b) In point form, show the *advantages* and *disadvantages* of a partnership as opposed to a single proprietorship.

(4) (c) In point form, show the *advantages* and *disadvantages* of a partnership as opposed to the corporate form.

18 Q. 2 On January 1, year 1, Company P purchased 70% of the outstanding voting common shares of Company S at a cost of $137,200. At acquisition date, the book value of Company S was $159,000, inventory was undervalued by $1,250, and depreciable fixed assets were undervalued by $6,250. The following information is available for *year 4*:

	Reported at end of year 4 P	S
Net Income	$ 44,000	$ 11,000
Current Assets	170,800	40,000
Investment in S (at Cost)	137,200	
Fixed Assets (net)	330,000	160,000
	$638,000	$200,000
Liabilities	$138,000	$ 30,000
Common Stock	400,000	150,000
Retained Earnings Beginning	60,000	10,000
Add net income	44,000	11,000
Less dividends	(4,000)	(1,000)
Retained Earnings End	100,000	20,000
	$638,000	$200,000

Required (round all calculations to nearest dollar):

(2) (a) Calculate minority interest in net income for year 4 assuming consolidation is appropriate.

(2) (b) Calculate minority interest in the Consolidated Balance Sheet as of the end of year 4.

(5) (c) Calculate goodwill remaining at the end of year 4 assuming a 20 year amortization period.

(9) (d) Calculate Consolidated Net Income for year 4 assuming 10 year remaining life at acquisition date for depreciable assets and sum-of-the-years' digits depreciation. Note that Company S uses the cost method and that Company S paid dividends during the year.

24 Q. 3. The comparative balance sheets for Alpha Co. Ltd. as of December 31, follow:

	1978	1977
Cash	$ 6,000	$ 7,000
Accounts Receivable	4,000	5,000
Allowance for doubtful accounts	(1,000)	(500)
Inventory	12,000	11,000
Investment in X Co. at equity	13,000	10,000
Property, Plant, and Equipment	40,000	30,000
Accumulated Depreciation	(10,000)	(8,000)
	$64,000	$54,500
Accounts Payable	$ 5,000	$ 7,000
Current Portion - Long term debt	6,000	6,000
Long Term Debt	10,000	16,000
Common Shares - no Par	8,000	3,000
Retained Earnings - Unappropriated	26,250	22,500
- Appropriated	8,750	—
	$64,000	$54,500

ADDITIONAL INFORMATION:

(a) In 1978, the company received a parcel of land as a gift from the city. The fair value of this land was $10,500. The company, in return, will develop its new factory there. The company's bookkeeper has not recorded the acquisition of the land since the cost to the company was zero.

(b) The income statement includes the following:

Net income	$17,500
Depreciation	3,000
Loss on disposal of equipment	2,000

(c) The investment in X Co. was acquired at the beginning of 1974. Upon acquisition, Alpha assigned $1,000 of its cost to goodwill which is being written off over 10 years. X Co. paid dividends of $500 in 1978 and Alpha received $400 of this amount.

(d) During 1978, the company sold a piece of equipment for cash. The cost was $10,000.

(e) The company acquired additional equipment for cash plus 200 newly issued shares of Alpha.

Required:

(4) (a) Using the working capital basis, calculate funds generated by operations.

(4) (b) Using the cash basis, calculate funds generated by operations.

(4) (c) Using the working capital basis, prepare a statement showing the increase or decrease in funds during the period.

(8) (d) Using the working capital basis, prepare in good form a statement of changes in financial position. Show funds generated by operations as a net amount.

(4) (e) Calculate the net income of X Co. for 1978.

20 Q. 4. The comparative balance sheets for Delta Company as of December 31 follow:

	1978	**1977**
Cash	$ 6,000	$ 7,000
Accounts Receivable	4,000	5,000
Allowance for doubtful accounts	(1,000)	(500)
Inventory (LIFO)	12,000	11,000
Investment in X Co. (Equity)	13,000	10,000
Fixed Assets	40,000	30,000
Accumulated Depreciation	(10,000)	(8,000)
	$64,000	$54,500
Accounts Payable	$ 5,000	$ 7,000
Current portion Long-term Debt	6,000	6,000
Long term Debt	10,000	16,000
Common Shares -- No Par	8,000	3,000
Retained Earnings	35,000	22,500
	$64,000	$54,500

The income statement for 1978 is:

Revenues	$55,000
Cost of goods sold	20,000
Gross margin	$35,000
Expenses	20,000
	$15,000

ADDITIONAL INFORMATION:

(a) A fixed asset was purchased at the beginning of 1978. All other fixed assets were acquired at the beginning of 1970 when the company was organized. The 1978 addition has a 10 year life and no salvage value. Straight line depreciation was used. No assets were disposed of.

(b) Long-term Debt was issued to finance the original fixed asset purchase.

(c) A $500 account receivable was considered doubtful as of the beginning of 1978 and was credited to the allowance account at that time.

(d) The investment in X Co. (80% owned) was acquired at the beginning of 1977. X Co. reported income of zero in 1977 and paid no dividends. In 1978, X Co. reported income of $5,000 and paid year-end dividends of $1,250. Income was earned evenly throughout the year. Delta acquired its invéstment at book value.

(e) Additional common shares were issued at the beginning of year, 1978.

(f) An average rate is appropriate for all other items.

(g) Price index data:

Year	Beginning	Average	End
1970	100	108	110
1971	110	115	120
1972	120	122	125
1973	125	125	125
1974	125	127	130
1975	130	137	140
1976	140	150	152
1977	152	160	162
1978	162	170	175

Required:

Prepare comparative price-level adjusted balance sheets for 1978 and 1977.

Page 3 of 4

10 Q. 5 You have computed the following from the records of Acme Wholesale Ltd.

	Year 3	Year 2	Year 1
Gross profit percentage	36%	$33\frac{1}{3}$%	30%
Inventory turnover	20 times	25 times	14 times
Average Inventory	$ 9,600	$ 9,000	$17,500
Average Accounts Receivable	$100,000	$84,375	$43,750
Income Tax rate	40%	30%	20%
Net income as percentage of sales	12%	7%	6%
Maximum credit period allowed	90 days	60 days	30 days

Required:

Comment on the trend in sales, gross profit percentage, and the net income percentage.

16 Q. 6. Beta Company manufactures light fixtures for the wholesale trade. A major piece of machinery is a drill press which cost $220,000 on June 30, year 1. This is being depreciated using sum of the years digits (S Y D) depreciation with an estimated three year life and $20,000 residual value.

As of January 1, year 3, the company will change its depreciation method to straight-line. Management feels that this method will reflect a better matching of revenues and expenses. The company has a December 31 year end.

Required:

(8) (a) Prepare depreciation tables for the asset using the S Y D method and the straight-line method. Include a schedule showing the difference each year between the methods. Use fractional year depreciation.

(4) (b) The controller of Beta Company notes that the estimate of yearly depreciation using the S Y D method will differ from the estimate of depreciation using the straight-line method. He proposes using the accounting treatment for changes in accounting estimates. What would be the consequence of accepting this view point? Explain.

(4) (c) Prepare a journal entry to reflect the change as of January 1, year 3. Assume that the books are still open for year 2. Use the recommended treatment according to the C.I.C.A. Handbook.

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END OF EXAMINATION

Page 4 of 4

CANADIAN CERTIFIED GENERAL ACCOUNTANTS' ASSOCIATION
ACCOUNTING 222 EXAMINATION
MARCH, 1980
SUGGESTED SOLUTIONS

Marks | Time: 3 Hours

12 Q. 1.

(4) (a)

A, B, C,
Statement of Partners' Capital Accounts
For the year ended ____

	Total	A	B	C
Beginning balances				
Add: investments during year				
share of net income				
Less: drawings				
Ending balance				

(4) (b) Advantages of a partnership over a proprietorship include:

1. bringing together of more capital, and
2. bringing together more skills

The disadvantage of a partnership is that one must cooperate with more people.

(4) (c) Advantages of a partnership as opposed to the corporate form are:

1. ease of organization,
2. elimination of shareholders' and directors' meetings, and
3. less governmental supervision.

The disadvantages are:
1. limited life,
2. mutual agency, and
3. unlimited liability.

18 Q. 2. Calculation of excesses and goodwill:

Purchase price for 70%	$137,200
70% of book value	111,300
Excess	$ 25,900
70% of inventory excess ($1,250)	$ 875
70% of fixed asset excess ($6,250)	4,375
Balance goodwill	20,650
	$ 25,900

Amortization of goodwill:
$20,650 ÷ 20 years = $1,033

Depreciation of fixed asset excess:
Sum of years is $\frac{n(n+1)}{2} = \frac{10(10+1)}{2} = 55$ years
Rate for year 4 is 7/55
Depreciation for year 4 is 7/55 × $4,375 = $557

S net for year 4 as reported		$11,000	
Less minority interest 30%		(3,300)	(a)
		$ 7,700	
Deduct:			
Amortization of goodwill		(1,033)	
Depreciation on excess		(557)	
Balance		$ 6,110	
P net as reported	$44,000		
Less dividends S	(700)	43,300	
Consolidated net income		$49,410	(d)

(2) (a) Minority interest in net income is $3,300 as above.

(2) (b) Minority interest on the balance sheet is 30% of the book value of S.
30% × $170,000 = $51,000

(5) (c) Goodwill remaining:
Goodwill on acquisition as above is $20,650, 4 years have been amortized; therefore, there are 16 years left unamortized at the end of year 4.
16/20 × $20,650 = $16,520
or 16 × $1,033 is $16,528 rounded.

(9) (d) Consolidated net income is $49,410 as above.

24 Q. 3.

(4) (a)

Net income	$17,500
Add: depreciation	3,000
: dividends from X Co.	400
: loss on equipment disposal	2,000
Deduct: Investment income X Co.	(3,400)
Working Capital from operations	$19,500

(4) (b)

Working Capital from operations as above	$19,500
Add: change in accounts receivable	1,000
change in allowance	500
Deduct: change in inventory	(1,000)
change in accounts payable	(2,000)
Cash from operations	$18,000

(4) (c)

	1978	1977
Cash	$ 6,000	$ 7,000
Accounts Receivable	4,000	5,000
Allowance	(1,000)	(500)
Inventory	12,000	11,000
Accounts Payable	(5,000)	(7,000)
Current Portion L.T.D.	(6,000)	(6,000)
	$10,000	$ 9,500
Increase	$ 500	

Page 2 of 6

(8) (d)

Alpha Co. Ltd.
Statement of Changes in Financial Position
For the year ended December 31, 1978

Financial Resources Generated	
Working Capital Generated:	
From operations	$19,500
Sales of equipment	7,000
Working Capital generated	$26,500
Financial Resources Generated not affecting Working Capital:	
Donation of Plant Site	10,500
Issue of Common stock for equipment	5,000
Total	$42,000
Financial Resources Applied	
Dividends Paid	$ 5,000
Purchase of Equipment	15,000
Reclassification of Long-Term Debt	6,000
	$26,000
Financial Resources Applied not affecting Working Capital:	
Investment in Plant Site	10,500
Issue of Common stock for equipment	5,000
	$41,500
Increase in net working capital	500
Total	$42,000

(4) (e) Net income of X Co. for 1978 is derived as follows:

Change in Investment account for 1978	$ 3,000
Add dividends received from X Co.	400
Investment income as reported by Alpha	$ 3,400
Add goodwill amortization $1,000/10 yrs.	100
Alpha's share of X Co. income	$ 3,500

Since Alpha received $400 dividends out of $500 paid, then ownership is 80%.
80% of X Co. income is $3,500
100% of X Co. income is $4,375

Page 3 of 6

20 Q. 4. The comparative balance sheets for Delta Company as of December 31 follow:

	1978	GPL 1978	1977		GPL 1977
Cash	$ 6,000	$ 6.000	$ 7,000	×175/162	$ 7,562
Accounts Receivable	4,000	4,000	5,000	×175/162	5,401
Allowance for doubtful accounts	(1,000)	(1,000)	(500)	×175/162	(540)
Inventory (LIFO)	12,000	13,060	11,000		12,031
Investment in X Co. (Equity)	13,000	14,631	10,000		11,513
Fixed Assets	40,000	63,302	30,000		52,500
Accumulated Depreciation	(10,000)	(16,830)	(8,000)		(14,000)
	$64,000	$83,163	$54,500		$74,467
Accounts Payable	$ 5,000	$ 5,000	$ 7,000	×175/162	$ 7,562
Current portion Long-term Debt	6,000	6,000	6,000	×175/162	6,481
Long-term Debt	10,000	10,000	16,000	×175/162	17,284
Common Shares -- No Par	8,000	10,651	3,000		5,250
Retained Earnings	35,000	51,512	22,500		37,890
	$64,000	$83,163	$54,500		$74,467

INVENTORY	Historical		GPL
1977	$11,000	× 175/160 =	$12,031
1978 Layer	1,000	× 175/170 =	1,029
1978	$12,000		$13,060

Assume 1977 inventory purchased in 1977. Other assumptions acceptable.

INVESTMENT IN X CO.	Historical			GPL	
Beginning 1977	10,000		175/152	11,513	
End 1977	10,000			11,513	
	4,000	1,000	175/170	4,118	1,000 Year end
End 1978	13,000			14,631	

FIXED ASSETS			
1970	$30,000	× 175/100 =	$52,500
1978 Addition	10,000	× 175/162 =	10,802
	$40,000		$63,302

ACCUMULATED DEPN	1978		
1970	$ 9,000	× 175/100 =	$15,750
1978 1/10 × 10,000	1,000	× 175/162 =	1,080
Balance Given	$10,000		$16,830
1970 in 1978	$ 8,000	× 175/100 =	$14,000

COMMON SHARES			
1970	$ 3,000	× 175/100 =	$ 5,250
1978	5,000	× 175/162 =	5,401
	$ 8,000		$10,651

Page 4 of 6

10 Q. 5 The sales volume is decreasing while the gross profit percentage is increasing, possibly caused by the elimination of low margin products or increase in prices. Net **income has increased** substantially even though the **tax rate has increased.** This is caused by a marked decrease in operating expenses in year 3.

The key to the foregoing is a reconstruction of the income statements as follows:

	3	2	1
Sales (CGS ÷ Cost %)	$300,000	$337,500	$350,000
*CGS (Average Inventory X Turnover)	192,000	225,000	245,000
Gross Profit	108,000	112,500	105,000
Operating Expenses (forced)	48,000	78,750	78,750
	60,000	33,750	26,250
Taxes	24,000	10,125	5,250
Net Income (Sales X Net Income %)	$ 36,000	$ 23,625	$ 21,000

*This calculation must be done first

16 Q. 6.

(8) (a) Note that this requires fractional year calculations.

SYD asset purchased beginning of year
Annual depreciation

Year		
1	3/6 × ($220,000 – $20,000)	= $100,000
2	2/6 × $200,000	= 66,667
3	1/6 × $200,000	= 33,333

SYD asset purchased June 30. Fractional year

Year	Depreciation	Months	Computation	Expense
1	$100,000	6	100,000 × 6/12	$ 50,000
2	66,667	12	100,000 × 6/12	
			+ 66,667 × 6/12	83,333
3	33,333	12	66,667 × 6/12	
			+ 33,333 × 6/12	50,000
4	0	6	33,333 × 6/12	16,667
				$200,000

Straight-Line

Year	Depreciation	Months	Computation	Expense
1	$ 66,666	6	66,666 × 6/12	$ 33,333
2	66,666	12	66,666 × 6/12	
			+ 66,666 × 6/12	66,666
3	66,668	12	same	66,666
4	0	6	same as 1st yr.	33,333
				$200,000★

Difference

Year	SYD	SL	Increase (decrease)
1	$ 50,000	$33,333	($16,667)★
2	83,333	66,666	(16,667)
3	50,000	66,666	16,666
4	16,667	33,333	16,666

★ rounding difference

Page 5 of 6

(4) (b) The consequence of accepting the controller's viewpoint is that the wrong accounting treatment would be used. A change in estimate would entail a prospective treatment, whereas a change in accounting principle requires a retroactive treatment.

He is correct in asserting that depreciation is merely an estimate based on estimated life, etc. However, the difference between the SYD amount and the SL amount is not a change in estimate as both expected life and residual value are the same in both situations. This is a change in accounting principle.

(4) (c) This requires a retroactive adjustment. Also, the books are still open.

Accumulated Depreciation	\$16,667	
Retained Earnings		\$16,667

To adjust retained earnings at the end of year 1, accumulated depreciation is too high (\$50,000 – \$33,333)

Accumulated Depreciation	\$16,667	
Depreciation Expense		\$16,667

To adjust depreciation expense in year 2 (\$83,333 – \$66,667).

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END OF SOLUTIONS

CANADIAN CERTIFIED GENERAL ACCOUNTANTS' ASSOCIATION
ACCOUNTING 222 EXAMINATION
JUNE, 1980

Marks **Time: 3 Hours**

10 Q. 1. Partners A and B are subject to the following agreement for the sharing of profits/losses:

1. Annual salaries are allowed -- $12,000 to A, $14,000 to B.
2. Interest at 10% is allowed on original capital contributions of $100,000 from A and $70,000 from B.
3. Any remainder is to be split in the ratio 3:2.

Required:

How much profit/loss would be required for A to be allocated $47,000 as his portion?

20 Q. 2. On January 1, 1977 P acquired 90% of the voting shares of S for $170,000. At that date the following additional information was available.

Company S

	Book Value	Fair Value
Non depreciable assets	$ 50,000	$ 70,000
Depreciable assets (net)*	100,000	120,000
	$150,000	
Liabilities	$ 10,000	10,000
Owners' Equity	140,000	
	$150,000	

* Estimated remaining life 5 years. Straight line depreciation.

Required:

(3) (a) Calculate the amount of goodwill purchased at acquisition date.

(7) (b) Assume that you are preparing a consolidated balance sheet for the year ended December 31, 1979. At that date the following balances are reported:

	P	S
Depreciable assets (net)	$200,000	$180,000

Calculate the consolidated balance of depreciable assets.

(7) (c) Outline the general characteristics of the purchase method.

(3) (d) Describe the circumstances that would preclude the use of the purchase method.

20 Q. 3. Balance sheet information follows for Omicron Company:

	1978	1977
Working Capital	$ 46,700	$ 61,995
Property, Plant and Equipment (net)	53,700	47,000
Investment in Subsidiary Co. (equity)	17,000	13,000
Investment in Beta Company (cost)	5,000	5,000
	$122,400	$126,995
Bonds Payable	$ 76,300	$ 79,800
Preferred Stock	20,000	20,000
Common Stock - No par	100,000	90,000
Premium on Preferred	5,000	5,000
Retained Earnings	(78,900)	(67,805)
	$122,400	$126,995

(a) The preferred stock is 6%, $100 par value, cumulative. Dividends were three years in arrears at the end of 1977, but there were no arrears at the end of 1978.

(b) During 1977, the company paid dividends to the common stockholders as follows: $4 per share for the year.

(c) The Subsidiary Company paid dividends of $4,000 in 1978. This company is 75% owned by its parent. The parent purchased the shares at book value.

(d) Beta Company paid $1,000 of dividends to Omicron Co. in 1978. Beta is 30% owned by Omicron Co.

(e) During 1978, Omicron issued 100 shares as a stock dividend.

(f) At the time of the stock dividend, Omicron also issued 300 common shares for equipment. The equipment was recorded at fair value of the shares issued.

(g) At the beginning of 1977, Omicron purchased a piece of machinery which is being depreciated over 10 years. Yearly depreciation expense for this machinery is $300.

Required:

(12) (a) Using the working capital basis, prepare a statement of changes in financial position for 1978.

(5) (b) In light of the statement prepared in (a), evaluate management's performance during the year.

(3) (c) In developing a statement of changes in financial position, transactions that affect only owner's equity accounts require careful analysis. For example, a common stock dividend on common stock is **generally** not reported in the statement.

In this situation, do you consider that the stock dividend should not be reported? Explain.

Page 2 of 4

20 Q. 4. A, B, and C are partners in a small manufacturing company. They share profits in a 4:2:1 ratio. At the end of year 4, their capital balances were $27,500, $32,000, and $39,500, respectively. Net income for year 5 was $17,794. The partnership agreement specifies that each partner may withdraw an amount up to but not greater than his income distribution for that year. This, however, is not cumulative. In addition, if by chance a partner withdraws more, then this must be returned to the company. To enforce these measures, an audit is to be performed each year that withdrawals are made. You are assisting in this year's audit and you find the following as of the end of year 5:

(1) Inventory was overvalued at the end of year 4 by $3,500 and undervalued at the end of year 5 by $1,750.

(2) The withdrawals made in year 5 were the first ever made by the partners. Each partner withdrew half his entitlement for the year.

(3) On January 1, year 1, the partnership purchased machinery for $40,000. Estimated life was 10 years with no salvage value. On the basis of new information obtained at the end of year 5, the asset should have been accorded a 15-year life as of the beginning of year 1.

(4) The partnership books have been closed for year 5.

Required:

(4) (a) Calculate the balances in the partners' capital accounts as of the end of year 5 as shown in the books before any adjustments are made.

(4) (b) Prepare a journal entry to adjust for the inventory errors.

(4) (c) With regard to the change in estimate of the machinery from a 10-year to a 15-year life, do you consider that a retroactive treatment or a prospective treatment is warranted? Include definitions of retroactive and prospective treatments in your explanation.

(4) (d) Regardless of your answer to (c), assume that you will recommend a prospective treatment for the machinery. Prepare a journal entry to adjust the books for inventory and machinery items and to conform to the partnership agreement.

(4) (e) The information on the change in estimated life was obtained at the end of year 5. Suppose the information had been obtained at the beginning of year 5. Would this make a difference to your journal entry in part (d) above? Explain, but do not prepare a new journal entry.

16 Q. 5. For a number of years now, reporting entities have been aware of the failure of the conventional historical cost model to encompass the impact of inflation on financial reports.

Partial or piecemeal approaches have been suggested to alleviate the problem. That is, individual items in the accounts are adjusted in some way. This approach is considered insufficient.

On the other hand, two fundamentally different but comprehensive approaches have been advocated: general price-level adjustments and current fair values (GPL and CFV).

Required:

(5) (a) Why is the historical cost model deficient in inflationary times?

(5) (b) Give two piecemeal approaches and explain how these are supposed to alleviate the problem.

(3) (c) Describe the GPL model.

(3) (d) Describe the CFV model.

14 Q. 6. The following data were taken from the financial statements of the Puritan Co. Ltd.

	1978	1977
Cash	$ 30,000	$ 40,000
Marketable Securities	10,000	10,000
Accounts Receivable	60,000	50,000
Notes Receivable	6,000	2,000
Inventory	150,000	160,000
Current Liabilities	90,000	80,000
Long Term Debt-Current	10,000	1,000

Required:

(7) (a) Calculate working capital, current ratio, and acid test ratio for 1978.

(7) (b) Evaluate the company's position in regards to these ratios.

100

END OF EXAMINATION

CANADIAN CERTIFIED GENERAL ACCOUNTANTS' ASSOCIATION
ACCOUNTING 222 EXAMINATION
JUNE, 1980
EXAMINER'S COMMENTS

Specific

Q.1 Generally well done, however, students were unsure about the word 'portion'.

Q.2 This problem showed a certain amount of misinterpretation. Students tended to equate the 'purchase' method with 'equity accounting'.

Q.3 Students still do not have a true understanding of the statement of changes in financial position.

Q.4 Generally well done.

Q.5 Generally well done.

Q.6 Generally well done.

CANADIAN CERTIFIED GENERAL ACCOUNTANTS' ASSOCIATION
ACCOUNTING 222 EXAMINATION
JUNE, 1980
SUGGESTED SOLUTIONS

Marks

Time: 3 Hours

10 Q. 1.

	Total	A
Salaries	$26,000	$12,000
Interest	17,000	10,000
Remainder	41,667	25,000
Total	$84,667	$47,000

If A's portion is $47,000, then the "remainder" to him must have been $25,000. Since the remainder is split 3:2, $25,000 is equal to 3/5 of the total. The total is $41,667 and B's share is $16,667. Income required is therefore $84,667.

20 Q. 2.

(3) (a)

Cost		$170,000
90% BV	$126,000	
90% Excess	36,000	162,000
Balance goodwill		$8,000

(7) (b) Excess of $36,000 is composed:

Non depreciable assets	$18,000
Depreciable assets	18,000
	$36,000

The depreciable assets have 5 years straight line remaining. At the end of 1979 two years are left.

i.e. 2/5 x $18,000 = $7,200

The consolidated figure is:

P		S		consolidated
$200,000	+	$180,000 + $7,200	=	$387,200

(7) (c) General characteristics (see p. 644):

1. assets/liabilities of acquired firm reported at parent cost, i.e., fair values at date of acquisition
2. total fair value less purchase cost is goodwill
3. consolidated retained earnings at acquisition is retained earnings of parent
4. minority interest is based on book (carrying) value
5. income of consolidated group includes income of subsidiary since acquisition only

(3) (d) The circumstance is that an **acquirer** cannot be identified. The student should describe what an acquirer is.

 Q. 3.

(12) (a)

Omicron Company
Statement of Changes in Financial Position
For 1978

Financial sources generated:	
Issue of common stock for equipment	$ 7,500
Total sources	$ 7,500
Financial resources applied:	
Operations	$6,995
Loss of (3795) + 3000 divs. sub. + 800 depn. — 7,000 Equity Sub. earnings	
Payment of Preferred dividends	4,800
Payment of Bonds	3,500
	$ 15,295
Purchase of equipment for Common shares	7,500
Total uses	$ 22,795
Decrease in working capital	$15,295

(5) (b) Evaluation:

Management is obviously in trouble. No funds are being generated from operations. New equipment is being financed through issue of share capital; working capital is being reduced to pay long-term debt and to pay preferred dividends. Futhermore, although it is **not** evident from the statement, we know that common shareholders are being given stock dividends. This might be to pacify them in some way.

(3) (c) It would perhaps be better to report the stock dividend in this case. The reader would then be aware of management's overall procedure to pacify the common shareholders. Some might be fooled by a stock dividend.

20 Q. 4.

(4)

(a)

	Total	A	B	C
Balances year 4	$ 99,000	$27,500	$32,000	$39,500
Income as reported	17,794	10,168	5,084	2,542
Withdrawals	(8,897)	(5,084)	(2,542)	(1,271)
Balances year 5	$107,897	$32,584	$34,542	$40,771

(4) (b) Inventory

Inventory	$1,750	
A		$1,000
B		500
C		250

Effect on net income

	4	5
year 4 error	$(3,500)	$3,500
year 5 error		1,750
	$(3,500)	$ 5,250

	A	B	C
($3,500)	($2,000)	($1,000)	($500)
5,250	3,000	1,500	750
	$1,000	$ 500	$250

(4) (c) **Retroactive:** the books adjusted to reflect a catch-up

Prospective: effect of the change is spread over the current and future periods

Generally accepted accounting principles tend to recognize that changes in estimates are not accorded retroactive treatments but, rather, are accounted for prospectively. The reason is that such changes are caused by uncertainties of an external nature. If the change resulted from an error, then retroactive adjustment would be proper to reflect income for distribution to the partners.

(4) (d) The entry required would be the same as in part (b). The partners can take out up to one half of their entitlement. Since the inventory errors increase net income, no partner has taken out more cash than the agreement calls for; therefore, no cash returned. In addition, prospective treatment of the machinery requires no entry.

(4) (e) The prospective treatment spreads the change over the current and future periods. As the information was received at the beginning of the period, the current year's income is affected. If the information were received at the end, then the current year's income would not be affected, so that no journal entry would be required for the machinery adjustment.

16 Q. 5.

(5) (a) The historical cost model:

1. fails to report realistic measures of income
2. fails to report realistic measures of assets
3. fails to report realistic measures of liabilities, i.e., the balance sheet and income statements are questioned

(5) (b) Piecemeal approaches (any two):

1. Use of LIFO — cost of goods then higher, income lower
2. Use of accelerated depreciation methods
3. Extra charges made on income statement to compensate for understatement of depreciation

(3) (c) The GPL model restates all account balances in terms of dollars with equivalent purchasing power.

(3) (d) The CFV model restates all account balances in terms of current fair value of the items rather than in terms of equivalent purchasing power.

14 Q. 6.

(7) (a) Working Capital $30 + 10 + 60 + 6 + 150 - 90 - 10 = \$156{,}000$

Current Ratio $\dfrac{30 + 10 + 60 + 6 + 150}{100} = \dfrac{2.56}{1}$

Acid test $\dfrac{30 + 10 + 60 + 6}{100} = \dfrac{1.06}{1}$

(7) (b) For an evaluation we should include the prior year's figures and note any trend.

WC $40 + 10 + 50 + 2 + 160 - 80 - 1 = \$181{,}000$

CR $\dfrac{40 + 10 + 50 + 2 + 160}{80 + 1} = \dfrac{3.23}{1}$

AT $\dfrac{40 + 10 + 50 + 2}{80 + 1} = \dfrac{1.26}{1}$

In general, a less liquid trend seems to be developing. Whether this is good or bad must be answered in light of the circumstances faced by the company. In addition, a two year period does not offer much on which to base an analysis.

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END OF SOLUTIONS

CANADIAN CERTIFIED GENERAL ACCOUNTANTS' ASSOCIATION

ECONOMICS 304 EXAMINATION

JANUARY, 1980

Marks **Time: 3 hours**

Please Note: Answer two questions from each PART of the examination. Do not answer more than a total of eight questions.

PART I — Answer two questions only.

11 Q. 1. "All we want in our industry is to be able to compete fairly with foreign imports. We want the government to just set tariffs on imports at a level such that the price of imported goods, including tariffs, is equal to the price of domestically produced goods. Then we could compete fairly because prices would be equal!"

Does this statement make economic sense? Explain.

11 Q. 2. "Since land is given to us by nature and is not produced with the use of resources it should be free. There are no costs associated with producing the land and there should not be any charge for using it. To charge for it just makes some landowners wealthy!"

Does this statement make economic sense? Explain.

11 Q. 3. "The retail sales tax is the most equitable type of tax because it treats all people equally. All people pay the same percentage of their incomes as their share of tax because the tax is set as a given percentage of the value of purchases!"

Does this statement make economic sense? Explain.

PART II — Answer two questions only.

14 Q. 4. It has been asserted in the past that the withholding of eggs from the market by the Canadian Egg Marketing Association had nothing to do with setting market prices. Rather, the eggs were withheld only when there was a "surplus" of eggs in the market.

Does this statement make economic sense? Explain.

14 Q. 5. Over the past half century, the number of domestic servants employed in Canada has declined substantially even though family income has increased greatly indicating that people should be demanding more of such services.

Can these events be reconciled with economic reasoning? Explain.

14 Q. 6. "The most important criticism that economists have of monopoly is that firms with monopoly power will earn economic profits and thereby misallocate resources by using too much land, labour and capital."

Does this statement make economic sense? Explain.

PART III — Answer two questions only.

11 Q. 7. Economists assert that the optimum (best) allocation of a country's resources would occur if all markets were perfectly competitive because all economic profits would be competed away.

Do you agree? Explain carefully.

11 Q. 8. "In order to minimize its costs for any given output, a firm should combine resources such that the last unit of each yields the same marginal physical product."

Do you agree? Explain carefully.

11 Q. 9. "If the government increases its transfer payments to individuals it won't affect GNP (G.N.E.) because they are payments made when no productive work is received in return and these national income accounting magnitudes measure current productive activity."

Do you agree? Explain carefully.

PART IV — Answer two questions only.

14 Q. 10. Assume that a country finds itself with high unemployment, a large deficit in its Balance of Payments and an unacceptably high rate of inflation. If you were an advisor to this country and could recommend either the use of monetary and fiscal policy and/or altering the exchange rate to counteract these problems what suggestion(s) would you make?

Explain carefully.

14 Q. 11. "People shouldn't be so concerned about our current rate of inflation in Canada which has recently been in the range of 7% - 11%. All that happens is that prices and incomes go up so nothing really changes fundamentally. If the inflation rate moved to 20% or over, however, then we should be concerned because a hyper or galloping inflation would be just around the corner and the Bank of Canada couldn't do anything about it."

Do you agree? Explain carefully.

14 Q. 12. "The federal government cannot continue to go on spending more than its revenues. Private firms cannot do it and neither can government. The government must run like business. Continued increases in the public debt can only lead ultimately to national bankruptcy!"

Do you agree? Explain carefully.

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END OF EXAMINATION

CANADIAN CERTIFIED GENERAL ACCOUNTANTS' ASSOCIATION
ECONOMICS 304 EXAMINATION
JANUARY 1980
EXAMINER'S COMMENTS

General

The general performance on this examination was somewhat disappointing. A number of students clearly did not read the questions carefully and therefore wrote off the questions that were asked. More time should be taken to consider questions before writing out the answers.

Specific

Q.1 Candidates that selected this question generally wrote well. The fallacy that tariffs might be used to promote 'fair competition' was pointed out by most students. Only a few candidates asserted that tariffs were good, in general, although some correctly noted that they might be used to promote an 'Infant Industry.'

Q.2 Candidates that answered this question did very well. The essential rationing function that prices perform with respect to scarce resources was pointed out by most students. Few students failed to indicate the need to ration land.

Q.3 Generally, this question was well answered. Many students, however, asserted without any defense that an 'equitable' tax is one that takes the same proportion of all taxpayers' income. This is, of course, a value judgement and not a scientific fact.

Q.4 Only those students that appeared to be poorly prepared in general failed to see that by restricting supply the Marketing Board is, in fact, maintaining a given price. Students indicated a good grasp of supply and demand analysis.

Q.5 This question required a bit of contemplation and reasoning. Those students that took their time did reasonably well and recognized that there was not a single correct answer but rather it was a logical and reasonable response that was consistent with economic theory that was being sought. A few candidates merely asserted that more information would be required before any answer could be given.

Q.6 A number of students correctly noted that the most important criticism of monopoly is the misallocation of resources but then did not indicate what the nature of the misallocation was. A few could not distinguish between economic profit and misallocation.

Q.7 Again, a number of candidates could not differentiate between earning economic profits and misallocating resources. In fact, a surprising number did not know what economic profit is.

Q.8 Only a minority of students chose this question, however, generally they did very well. Most indicated correctly that the 'least-cost rule' requires that the last dollar spent on each resource should yield the same marginal physical product.

Q.9 Most of the students that chose this question, correctly noted that transfer payments are not a return for productive work effort and so are not in the first round included in GNP. However, many failed to note that the second round transfers will affect spending because they will alter disposable income. A few students clearly did not know what transfer payments are.

Q.10 This question was not particularly well answered. Most students correctly noted that no one simple policy would correct all three policy problems simultaneously. However, many did not attempt to set out the policy mix that would best move the economy to full employment, price stability and Balance of Payments equilibrium.

Q.11 Like the previous question, students only satisfactorily answered a part of this question. Most pointed out the effects of inflation but failed to discuss the possibility of the present inflation becoming a hyper-inflation or whether or not the Bank of Canada could counteract this possibility.

Q.12 While most students correctly noted that the analogy between public and private debt is improper, most did not discuss the possibility that a large and growing public debt might involve a burden on future generations. Surprisingly few students had any criticisms of government spending in excess of tax revenues.

CANADIAN CERTIFIED GENERAL ACCOUNTANTS' ASSOCIATION

ECONOMICS 304 EXAMINATION

JANUARY, 1980

SUGGESTED SOLUTIONS

Marks **Time: 3 hours**

11 Q. 1. This argument for tariffs has a logical sounding appeal, however, it would have disastrous effects if adopted generally. In effect, such a tariff philosophy if widely implemented would eliminate the very basis for trade. The case for trade is based on differences in relative efficiencies as evidenced by different relative costs (prices). If tariffs eliminated these differences the basis for trade would be eliminated.

11 Q. 2. It is true that there are no costs associated with producing land but that does not mean it should be "free". As long as a resource is scarce in the sense that the quantity demanded exceeds the quantity supplied at a zero price, it must be rationed out somehow and the price system will do it efficiently. The presumption is that those who can pay the most for the land have the most socially beneficial use for the land. If the payment to landowners results in an undesirable distribution of income, redistribution measures can be used to correct it.

11 Q. 3. There is nothing, in principle, that asserts that an "equitable" tax is one that treats all people equally. Furthermore, the retail sales tax doesn't necessarily take the same percentage of everyone's income because the percentage of income spent on taxable items differs between individuals and income classes. Actually, such a tax is likely to take a larger **percentage** of a low income person's income than of a higher income person.

14 Q. 4. The assertion doesn't make economic sense. In the first place, withholding eggs from the market has the effect of reducing market supply and increasing price. The presumption is that this is done so as to force price up to a pre-determined level. A "surplus" means that the quantity supplied exceeds the quantity demanded **at the current market price.** So holding eggs off the market to counteract a "surplus" is clearly an attempt to maintain or attain higher prices.

14 Q. 5. They can be reconciled by noting that other events have also occurred that are related to the market for servants. On the demand side, while incomes have increased which would normally increase demand, tastes may have changed against the use of servants. Also many substitutes for servants' services have become cheaper or have been developed, e.g. vacuum cleaners, dishwashers, etc. These would reduce demand. On the supply side, it is likely that as other occupations become more attractive fewer persons want to become servants so supply is reduced.

14 Q. 6. The most significant criticism that economists have of monopoly power is that monopolists misallocate resources by producing where price is greater than marginal cost. They produce too few goods and services and induce an artificial scarcity so as not to spoil their market. They may or may not make economic profits, i.e. produce where price is greater than average cost. The existence of economic profits has nothing to do with the misallocation of resources that economists criticize.

11 Q. 7. It is true that the optimum (best) allocation of resources occur under perfectly competitive market conditions. However, this assertion is not made because economic profits will be competed away. It is because output will occur where price equals marginal cost Only when this condition holds will the value consumers place on a commodity equal the value they attach to foregone other goods and services that the required resources could have produced.

11 Q. 8. The statement is incorrect. The proper rule is that resources should be combined such that the last dollar spent on each resource yields the same marginal physical product, that is, the least cost combination rule states that resources are correctly combined when the marginal physical product of each resource divided by its price is the same. The statement in the question makes no reference to resource prices (marginal resource cost) and therefore is incorrect.

11 Q. 9. The statement is wrong. It is true that transfers do not represent payment for productive services rendered in the current period and so are not counted in G.N.P. (G.N.E.) in the first round. However, when part of the transfers are spent by the recipients on consumption it will result in successive new rounds of productive activity that will be counted, i.e. transfers do have a multiplier effect.

14 Q. 10. The situation posed is a difficult one because if monetary and fiscal policy alone are used to combat inflation, i.e. tight policies, it may improve the deficit and reduce inflation but will increase unemployment. If they are used to combat unemployment, i.e. expansionary policies, it will make the inflation and deficit worse. If depreciation of the currency alone is used to combat the deficit it will improve it by making imports more expensive and exports cheaper and thereby reduce unemployment by directing more spending on domestically produced goods but it would increase inflationary pressure. Therefore, some combination of tight monetary and fiscal policy to combat inflation and a currency depreciation to counteract the deficit and unemployment is the correct policy mix.

14 O. 11. It is not correct to state that nothing fundamentally changes during a moderate (7% - 11%) inflation. There is a redistribution of income which generally involves a transfer of real income from the old to younger active earners. This redistribution is generally taken to be undesirable. Furthermore, in a trading country, inflation may reduce a country's exports and increase its imports if exchange rates are not free to move so a deficit in the Balance of Payments may occur. The notion that if inflation goes over some figure the country will slip into a hyper-inflationary situation which the Bank of Canada can't correct is nonsense. Inflation can't continue without money creation which the Bank can stop.

14 O. 12. The analogy that is implied between private and public debt is not valid. Of course, a private firm cannot continue to spend more than its revenues without ultimately going bankrupt. This is, however, not true of the federal government because it can always finance its expenditures or redeem debt by money creation. Also, in the case of federal debt that is domestically held we owe the debt to ourselves. This all doesn't mean, however, that the debt may not impose a burden on future generations. We should make sure that borrowing today doesn't reduce the capital stock inherited by or goods available for consumption by future generations, i.e. the transfer burden, etc. Bankruptcy is not a problem but burdens imposed on future generations may be.

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END OF SOLUTIONS

PAGE 2 OF 2

CANADIAN CERTIFIED GENERAL ACCOUNTANTS' ASSOCIATION
COST ACCOUNTING 311 EXAMINATION
JANUARY,1980

Marks | Time: 3 Hours

Note: Show all your calculations

10 Q. 1. As the result of a joint process, the JKL Co. Ltd. manufactures three products, J, K, and L. Every 100 pounds of raw material input results in output of six J, three K and two L. In the past month, 100,000 pounds of raw material costing $80,000 were put into production. Joint processing costs were $88,000. Unit sales prices of the products were:

J	$50
K	40
L	20

However, before the products were ready to sell, some further processing was done at the following costs:

J	$30,000
K	6,000
L	4,000

Required:

What gross profit did JKL make on *each* of its three products?

PAGE 1 OF 5

15 Q. 2. The Holden Co. Ltd. operates a processing plant with two departments, Mixing and Packaging. You have been asked to prepare a Cost of Production report for the Packaging department, given the following information:

(1) Beginning inventory -- 4,000 units, one-half complete

Cost of beginning inventory were:

Transferred from Mixing department	$ 9,800
Conversion costs	3,500
	$13,300

(2) Received from Mixing department -- 8,000 units at a cost of $35,200.

(3) Material used by Packaging department during the period -- $3,750.

(4) Labor and overhead charged to Packaging department during the period -- $14,500.

(5) Ending inventory -- 4,500 units, one-third complete.

(6) Transferred to Finished Goods inventory -- 7,000 units.

(7) Material is added at the end of the process. Inspection takes place after the material is added. 5% of units transferred to Finished Goods is considered normal spoilage.

Required:

Prepare a Cost of Production report for the Packaging department using the weighted average method.

12 Q. 3. The Crawford Co. Ltd. uses a standard cost system in accounting for its only product craw which it sells for $22.00/unit.

STANDARD COST PER UNIT

Direct materials	$ 4.00
Direct labour	6.00
Variable overhead	2.00
Fixed overhead	3.00
	$15.00

On October 1, 1979 there were 10,000 units of craw on hand. During October 50,000 units were produced and 45,000 sold. Denominator activity was 60,000 units.

Costs incurred during October were:

Direct materials	$198,000
Direct labour	305,000
Variable overhead	103,000
Fixed overhead	186,000
Variable selling and administrative	50,000
Fixed selling and administrative	74,000

Required:

(1) (a) Does Crawford Co. Ltd. use direct or absorption costing?

(8) (b) Prepare an Income Statement for October, 1979, using Direct Costing.

(3) (c) What would the net income have been if Crawford had used absorption costing?

12 Q. 4. The Kenyon Co. Ltd. produces one product. Its budget for 1980 includes the following:

Production	90,000 units
Sales	80,000 units
Variable manufacturing costs	$900,000
Fixed manufacturing costs	200,000
Variable selling costs	240,000
Fixed selling and administrative costs	150,000

Production capacity is 100,000 units.
Kenyon pays income tax at a rate of 40%.

Required:

(3) (a) What price would Kenyon have to charge in order to produce a net income *before* tax of $110,000?

(3) (b) At a sales price of $18, what would Kenyon's breakeven point in units be?

(3) (c) At a sales price of $23, how many units would Kenyon have to sell in order to produce a net income *after* taxes of $240,000?

(3) (d) If Kenyon's sales price to regular customers is $22, should they accept a special order for 15,000 units for $180,000?

26 Q. 5. The Irvine Co. Ltd. produces a product with the following standard costs:

Materials	3 sq. ft. @ $2.00	$ 6.00
Direct labour	½ hr. @ $4.00	2.00
Variable overhead	½ hr. @ $3.00	1.50
Fixed overhead	½ hr. @ $2.00	1.00
		$10.50

Normal volume is 8,000 units.

The following information pertains to actual activity during 1978:

(1) 9,000 units were produced.
(2) 30,000 sq. ft. of material was purchased at $2.07.
(3) Direct labour payroll was $18,040 for 4,400 hours work.
(4) 28,000 sq. ft. of material was used.
(5) Variable overhead cost $14,000.
(6) Fixed overhead cost $8,500.
(7) 8,200 units were sold at $16.00.
(8) Selling and administrative expenses were $20,000.

Required:

(18) (a) Journal entries to record the above information and to isolate materials and labour variances.

(8) (b) Analysis of overhead variances.

10 Q. 6. The Johnson Co. Ltd. treats payroll taxes as an indirect cost. For the month of March, 1979, the records show:

Direct labour	$18,000
Indirect labor	3,000
Sales salaries	2,000
Office salaries	1,000

The following deductions are necessary:

Unemployment insurance	1.0%
Canadian pension plan	1.8%
Income tax	20.0%

The employer makes an equal contribution for Canada Pension Plan, 1.4% for unemployment insurance, and is also required to pay 2% of factory payroll to the Workers Compensation Board.

Required:

Journal entries to record the above payroll. Assume that all employees are paid on March 31, but that no payments have been made to government departments.

15 Q. 7.

(3) (a) Describe the meaning and usefulness of a flexible budget.

(2) (b) "I don't understand what the fuss concerning ideal, practical, normal, or expected annual activity is all about." What causes the problem in the first place?

(4) (c) How is managerial control over costs achieved in a job costing situation where standards costs are not used?

(3) (d) Name three yardsticks that are available for measuring performance as reflected by actual costs incurred?

(3) (e) List at least three subtotals that might be high-lighted in a contribution income statement by segments.

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END OF EXAMINATION

CANADIAN CERTIFIED GENERAL ACCOUNTANTS' ASSOCIATION
COST ACCOUNTING 311 EXAMINATION
JANUARY 1980
EXAMINER'S COMMENTS

Specific

Q.1 This question was generally well answered by most candidates. The only common error was that even though sufficient information was supplied to enable the candidate to use the relative sales value approach, which is the superior method, many reverted to the less desirable physical measures method for allocating joint costs.

Q.2 This question was very well handled by the majority of candidates. Common errors included:

(1) ignoring Transferred In both in terms of units and costs;
(2) not calculating abnormal spoilage;
(3) incorrectly allocating units across Transferred In, Materials, and Conversion Costs;
(4) arithmetic errors; and
(5) not charging all of normal spoilage costs to Finished Goods.

Q.3 (a) It was surprising how many candidates gave the wrong answer for this part and yet were able to answer parts (b) and (c) correctly. Many answers appeared to be guesses.

(b) Common errors were as follows:

(1) using an absorption rather than a direct costing approach;
(2) ignoring inventories;
(3) omitting variable variances or computing them incorrectly; and
(4) showing Fixed Overhead as $150,000 or $180,000 rather than $186,000.

(c) Common errors included:

(1) working out a detailed income statement but ignoring variances;
(2) subtracting rather than adding the $15,000 difference;
(3) assuming the difference was due to variances rather than inventories; and
(4) ignoring the beginning inventory.

Q.4 (a) Many candidates seemed unable to determine how to approach this part of the question. Many candidates used the variable manufacturing expenses associated with 90,000 units of production rather than with 80,000 units of sales in calculating the appropriate selling price per unit.

(b) This part was done correctly by most candidates.

(c) This part was generally well done by most candidates although some candidates incorrectly calculated the before-tax profit.

(d) This part was poorly done by many candidates. The most common errors were:

(1) incorrectly calculating the appropriate applicable variable expenses associated with the special order;
(2) incorrectly calculating the selling price per unit for the special order;
(3) assuming that variable selling expenses would apply to the special order without any explanation of the assumption; and
(4) assuming that 90,000 units had already been sold rather than 80,000 units thus leaving the company with insufficient capacity to produce the extra 15,000 units.

Q.5 (a) There was a great variety of errors in this part of the problem. Some of the most common errors were as follows:

(1) failing to make all the possible entries;
(2) reversing debits and credits, particularly for Sales;
(3) recording Materials in square feet rather than dollars;
(4) computing the Labour Rate variance on standard hours and the Labour Efficiency variance at the actual rate; and
(5) mixing up the Overhead Control and Applied amounts.

(b) In this part, most of the errors were in the Budget amounts. In some cases, the standard costs were incorrectly based on 8,000 units. Some candidates got the favorables and unfavorables mixed up.

Q.6 This question was generally well done by most candidates. The most common errors were:

(1) incorrectly calculating worker's compensation;
(2) neglecting to include entry dates;
(3) failing to use the correct account titles; and
(4) incorrectly calculating the Income Tax Withheld.

Q.7 This question was poorly handled by many candidates and was often answered generally rather than specifically.

(a) Many candidates indicated that flexible is different from static but did not say how or in what way.

(b) A common approach was to define ideal, practical, and normal, but not to refer to fixed overhead.

(c) Many answered as if a standard was in place and hence did not really answer the question.

(d) This part was very well handled by most candidates.

(e) Many responses dealt with costs rather than contributions.

CANADIAN CERTIFIED GENERAL ACCOUNTANTS' ASSOCIATION
COST ACCOUNTING 311 EXAMINATION
JANUARY,1980
SUGGESTED SOLUTIONS

Marks

Time: 3 Hours

Note: Show all your calculations

10 Q. 1.

	J	K	L	Total
Sales value	300,000	120,000	40,000	460,000
Processing	30,000	6,000	4,000	40,000
Basis for allocation	270,000	114,000	36,000	420,000
Joint costs	108,000	45,600	14,400	168,000
Gross profit	162,000	68,400	21,600	252,000

15 Q. 2.

COST OF PRODUCTION REPORT

PACKAGING DEPARTMENT

	Physical Flow	Transferred In	Materials	Conversion Costs
Beginning inventory	4,000			
Received from Mixing Dept.	8,000			
	12,000			
Finished	7,000	7,000	7,000	7,000
Normal spoilage	350	350	350	350
Abnormal spoilage	150	150	150	150
Ending inventory	4,500	4,500	-	1,500
Total work done	12,000	12,000	7,500	9,000

	Beginning Inventory	Current Costs	Total Costs	Equivalent Units	Unit Cost
Transferred in	9,800	35,200	45,000	12,000	3.75
Materials	-	3,750	3,750	7,500	.50
Conversion costs	3,500	14,500	18,000	9,000	2.00
	13,300	53,450	66,750		6.25

Costs Accounted for:		
Transferred to Finished Goods:		
7,000 @ \$6.25		\$43,750.00
Normal spoilage:		
350 @ \$6.25		2,187.50
		\$45,937.50
Abnormal spoilage:		
150 @ \$6.25		937.50
Ending inventory:		
4,500 @ \$3.75	\$16,875.00	
1,500 @ \$2.00	3,000.00	19,875.00
		\$66,750.00

PAGE 2 OF 6

12 Q. 3.

(1) (a) Absorption Costing.

(8) (b)

CRAWFORD CO. LTD.
Income Statement
For the Month of December, 1978

Sales (45,000 @ $22.00)		$990,000
Variable costs:		
Beginning inventory (10,000 @ $12)		120,000
Production (50,000 @ $12)		600,000
		$720,000
Ending inventory (15,000 @ $12)		180,000
		$540,000
Variances (net unfavourable)		6,000
Variable selling and administrative expenses		50,000
		$596,000
Contribution margin		$394,000
Fixed costs:		
Overhead	$186,000	
Selling and administrative	74,000	260,000
Net income		$134,000

SCHEDULE OF VARIANCES (not required)

Direct materials	$ 2,000 F
Direct labour	5,000 U
Variable overhead	3,000 U
	$ 6,000 U

(3) (c) Absorption costing net income would be higher by:

$3 (10,000 - 15,000) =	$ 15,000
Direct costing net income	134,000
Absorption costing net income	$149,000

12 Q. 4.

(3) (a) $\dfrac{800{,}000 + 200{,}000 + 240{,}000 + 150{,}000 + 110{,}000}{80{,}000} = \underline{\underline{\$18.75}}$

(3) (b) $\dfrac{200{,}000 + 150{,}000}{18 - (10 + 3)} = \underline{\underline{70{,}000 \text{ units}}}$

(3) (c) Required net income before taxes:

$\dfrac{100}{60} \times \$240{,}000 = \$400{,}000$

$\dfrac{350{,}000 + 400{,}000}{23 - 13} = \underline{\underline{75{,}000 \text{ units}}}$

(3) (d) Sales price per unit = $12.00
Variable manufacturing cost per unit = 10.00

Kenyon should accept this order if the variable selling expenses will be less than $2.00/unit and if their regular sales will not be affected.

26 Q. 5.

(18) (a)

Stores (30,000 @ $2.00)	60,000	
Materials price variance (30,000 @ $.07)	2,100	
Accounts payable (30,000 @ $2.07		62,100
Work in process (27,000 @ $2.00)	54,000	
Materials quantity variance (1,000 @ $2.00)	2,000	
Stores (28,000 @ $2.00)		56,000
Work in process (4,500 @ $4.00)	18,000	
Labour rate variance (4,400 @ $.10)	440	
Labour efficiency variance (100 @ $4.00)		400
Accrued payroll		18,040
Work in process (9,000 @ $2.50)	22,500	
Variable overhead applied (9,000 @ $1.50)		13,500
Fixed overhead applied (9,000 @ $1.00)		9,000
Variable overhead control	14,000	
Fixed overhead control	8,500	
Miscellaneous credits		22,500
Finished goods (9,000 @ $10.50)	94,500	
Work in process		94,500
Cost of goods sold (8,200 @ $10.50)	86,100	
Finished goods		86,100
Accounts receivable (8,200 @ $16.00)	131,200	
Sales		131,200
Selling and administrative expenses	20,000	
Miscellaneous credits		20,000

(8) (b)

	Actual	Budget Actual	Budget Standard	Standard Applied
Variable	14,000	13,200	13,500	13,500
Fixed	8,500	8,000	8,000	9,000
Total	22,500	21,200	21,500	22,500

	Spending	Efficiency	Denominator
Variable	800 U	300 F	–
Fixed	500 U	–	1,000 F
	1,300 U	300 F	1,000 F

10 Q. 6.

Mar. 31	Work in process	18,000	
	Overhead control	4,092	
	Selling expense control	2,064	
	Administrative expense control	1,032	
	Accrued payroll		24,000
	Unemployment insurance		336
	Canada pension plan		432
	Workers compensation		420
Mar. 31	Accrued payroll	24,000	
	Unemployment insurance		240
	Canada pension plan		432
	Income tax withheld		4,800
	Cash		18,528

15 Q. 7.

(3) (a) A flexible budget (as constrasted to a static budget) recognizes that some costs are fixed while others are variable. In evaluating actual performance, the budget adjusts to actual volume and therefore enables a better evaluation of actual performance

(2) (b) The entire problem of choosing among different capacity application bases is raised by the presence of fixed overhead.

(4) (c) Departmental control over usage of direct material and direct labour is achieved through the use of daily or weekly reports summarizing material requisitions and direct labour work tickets. In addition, the job cost sheets serve a control function. Comparisons are made between estimates of job costs and the costs finally applied to the job. Deviations are investigated so that their underlying causes may be discovered. Managerial control over overhead is achieved through the use of two overhead accounts - Control and Applied.

(3) (d) (1) Costs of preceding periods.
(2) Budgets.
(3) Standard costs.

(3) (e) (1) Contribution margin.
(2) Contribution controllable by segment managers.
(3) Contribution by segments.

100

END OF SOLUTIONS

CANADIAN CERTIFIED GENERAL ACCOUNTANTS' ASSOCIATION

COST ACCOUNTING 311 EXAMINATION
MARCH, 1980

Marks

Time: 3 hours

NOTE: Show all your calculations

9 Q. 1. The Palmer Co. Ltd. has been producing and selling 10,000 units of its product per month, and costs have been as follows:

Direct materials	$20,000
Direct labour	35,000
Variable overhead	15,000
Fixed overhead	24,000
Variable selling and administrative expenses	10,000
Fixed selling and administrative expenses	13,000

The sales price per unit has been $15.00.
Plant capacity is 18,000 units.

The company has received an offer from a special customer who would like to buy *exactly* 5,000 units of Palmer's product for $9.00 per unit. Selling and administrative expenses related to this special order would be $1,500.

Required:

(4) (a) Should Palmer accept this special order?
Show computations.

(5) (b) Would your answer to (a) be different if plant capacity were only 13,000 units?
Show computations.

Page 1 of 5

26 Q. 2. The Marshall Co. Ltd. uses a standard process costing system in accounting for costs in its one production department. Material A is added at the beginning of the process, and Material B when the units are 90% complete. Conversion costs are incurred uniformly throughout the process.

Inspection takes place at the end of the process and spoilage is expected to be 5% of good output.

Denominator activity is 7,800 direct labour hours.

Standard Cost per Unit

Material A	4 gal. @ $1.20	$ 4.80
Material B	2 sq. ft. @ $.70	1.40
Direct labour	1 hour @ $5.75	5.75
Variable overhead	1 hour @ $1.80	1.80
Fixed overhead	1 hour @ $5.00	5.00
		$18.75

The following information pertains to the month of January, 1980:

Beginning inventory — 3,000 units, one-third complete.
11,000 units were started during January.
8,000 units were finished during the month.
5,000 units were still in process at the end of the month and were 40% complete.

Actual costs were:

Material A (50,000 gal. @ $1.00)	$ 50,000
Material B (18,000 sq. ft. @ $.75)	13,500
Direct labour (10,200 hours @ $6.00)	61,200
Variable overhead	20,100
Fixed overhead	40,000
	$184,800

Required:

(6) (a) Compute January equivalent production for Material A, Material B and Conversion Costs.

(20) (b) Compute ten variances for the month of January, 1980.

8 Q. 3. The Graham Co. Ltd. has developed the following figures to assist in controlling one of its inventory items:

Economic order quantity	— 1,000 units
Average daily use	— 100 units
Minimum daily use	— 80 units
Maximum daily use	— 120 units
Working days per year	— 250 days
Safety stock	— 400 units
Cost of carrying inventory	— $1.00/unit/year
Lead time	— 7 working days

Required:

(6) (a) Compute the following:

(1) Average inventory
(2) Reorder point
(3) Normal maximum inventory
(4) Absolute maximum inventory
(5) Cost of placing orders

(2) (b) What is the objective of the Economic Order Quantity formula?

15 Q. 4. The Layton Co. Ltd. is in the process of preparing its budget for the coming year. The sales forecast includes the following:

June	—	6,000 units
July	—	10,000
August	—	9,000
September	—	5,000

Ending inventories of finished goods are expected to be one-quarter of the following month's projected sales.

Each unit of finished product includes 5 square feet of Material A and 2 gallons of Material B. Projected prices are $3.00/sq. ft. for Material A and $1.00/gal. for Material B. Ending inventories of materials are expected to be 20% of the following month's production requirements.

Accounts payable for materials are eligible for a 2/10; n/30 discount. Layton plans to take advantage of all purchase discounts. Assume that one-third of the purchases of any month are due for discount and are paid for in the following month.

No Work in Process is budgeted for.

Required:

Cash disbursements related to Material A for the month of July.

14 Q. 5. The Neilson Co. Ltd. uses a job order cost system and applies overhead at a predetermined rate of 50% of direct labour cost.

Some selected account balances at the beginning and end of February, 1980, were as follows:

	February 1	**February 29**
Stores	10,000	38,000
Work in Process	?	110,000
Finished Goods	50,000	150,000
Cost of Goods Sold	—	200,000
Accrued Payroll	11,000	14,000
Accounts Payable	25,000	12,000
Overhead Applied	—	90,000

Other information for the month of February was as follows:

(1) Miscellaneous overhead costs totalled $35,000.

(2) Purchases of materials and supplies totalled $160,000.

(3) Overhead was over-applied by $5,000.

(4) Supplies used during the month cost $22,000.

(5) The Accounts Payable account is used only for purchases of materials and supplies.

Required:

(2) (a) Direct labour

(2) (b) Cost of goods manufactured

(2) (c) Indirect labour

(2) (d) Payment of Accounts Payable

(2) (e) Payment of Payroll

(2) (f) Direct materials used

(2) (g) Work in Process, February 1st

16 Q. 6. The Olson Co. Ltd. produces a product with the following standard cost per unit:

Direct materials	$6.00
Direct labour	8.00
Variable overhead	5.00
Fixed overhead	2.00

Denominator activity was 60,000 units (normal activity).
Practical capacity is 100,000 units.

During 1979, 75,000 units were produced and 60,000 units were sold. There was no Work in Process on December 31st.

Actual costs incurred during 1979 were:

Direct materials	$460,000
Direct labour	625,000
Variable overhead	370,000
Fixed overhead	156,000

Required:

Compute the value of the ending inventory of Finished Goods under each of the following methods:

(6) (a) Direct costing using standard costs.
Variances prorated.

(5) (b) Absorption costing using actual costs.

(5) (c) Absorption costing using actual prime costs and applied overhead.
Practical capacity used as a denominator.
Variances not prorated.

12 Q. 7. **Required:**

Answer the following INDEPENDENT questions:

(3) (a) Relate responsibility accounting to segment income statements.

(3) (b) Why are service department costs allocated to producing departments?
Identify two methods of allocating service department costs.

(3) (c) In a make-or-buy decision, what costs would be relevant?

(3) (d) Describe the journal entries required to record payroll and specify when they would have to be made.

100

END OF EXAMINATION

CANADIAN CERTIFIED GENERAL ACCOUNTANTS' ASSOCIATION
COST ACCOUNTING 311 EXAMINATION
MARCH, 1980
EXAMINER'S COMMENTS

Specific

Q.1 (a) This part was well done by most candidates.

(b) This part was poorly done by many candidates. The most common errors were:

(1) an assumption that because plant capacity was only 13,000 units, the special order could not be accepted at all. The order could be accepted if regular sales were held to 8,000 units;

(2) a failure to realize that the contribution lost on 2,000 units of regular sales more than offset the gain on 5,000 special sale units if the order was accepted, thus making the special order unacceptable;

(3) an inability to realize that the comparison of alternatives was 10,000 units sold at regular price versus 13,000 units (8,000 @ regular price plus 5,000 at the special sale price of $9.00).

Q.2 (a) Two common errors in this part were an incorrect division of the spoiled units into normal and abnormal categories, and the failure to deduct the work done during previous periods. Some candidates did not distinguish between materials A and B.

(b) Computation of material of labour variances were fairly well done, except for careless mistakes. In calculating the overhead variances, the wrong numbers of hours were often used; i.e., standard rather than actual, denominator rather than standard.

Q.3 (a) This part of the question was reasonably well done by most candidates and most errors were usually the result of an inability to remember the appropriate formulas.

(b) The main problem in this section was a failure to realize that the objective of the EOQ formula is to minimize total costs relating to inventory in terms of both the cost of *placing the order* and the cost of *carrying the inventory.*

Q.4 The most common error was an assumption that sales, production and purchases were equal. There seemed to be a great deal of difficulty in calculating the dollar amount of cash disbursements, in particular, the inclusion of 1/3 of May purchases.

Q.5 For such a standard topic, a number of students had no idea how to deal with it.

(a) Usually done well.

(b) Frequently gave cost of goods sold rather than cost of goods manufactured.

(c) Well done or assumed it to equal zero.

(d) Well done.

(e) Usually done well; some confused direct with indirect.

(f) A number of candidates could not compute the $22,000 of overhead.

(g) Usually done well.

Q.6 (a) One common error in this part was the inclusion of fixed overhead.

(b) This part was fairly well done.

(c) Materials and labour were usually correct, but the wrong amounts of overhead were often included. For example, many candidates used a $2.00 fixed overhead rate rather than $1.20.

Q.7 This question was generally badly done by nearly all candidates and indicated a lack of preparation for the examination.

(a) Few candidates mentioned the fact that in responsibility accounting, managers should only be held *responsible for costs over which they exercise control.*

Most candidates had no idea how segment income statements were related to responsibility accounting.

(b) This part was fairly well done.

(c) The most common error in this part was a failure to realize that the relevant cost when buying is the *cost to buy* and that in making the product it is only the *variable costs* that are relevant.

(d) The most common error in this part was the incompleteness of the answers. Many candidates forgot the employer's liability for employee deductions. Also, many candidates forgot the entry to record remittances to the government agencies.

CANADIAN CERTIFIED GENERAL ACCOUNTANTS' ASSOCIATION

COST ACCOUNTING 311 EXAMINATION
MARCH, 1980
SUGGESTED SOLUTIONS

Marks **Time: 3 hours**

9 Q. 1. (a) Variable manufacturing costs per unit:

(4)

Direct materials	$2.00
Direct labour	3.50
Variable overhead	1.50
	$7.00

Contribution from special order:
5,000 (9.00 − 7.00) − 1,500 = 8,500

Conclusion: should accept special order.

(5) (b) Loss of 2,000 regular units would reduce contribution by:

2,000 (15.00 − 7.00 − 1.00)	=	14,000
Contribution from special order		8,500
Decrease in contribution		5,500

Conclusion: should not accept special order.

Page 1 of 6

26 Q. 2. (a)
(6)

	Physical Flow	Material A	Material B	Conversion Costs
Beginning inventory (1/3)	3,000			
Started	11,000			
	14,000			
Finished	8,000	8,000	8,000	8,000
Normal spoilage	400	400	400	400
Abnormal spoilage	600	600	600	600
Ending inventory (40%)	5,000	5,000	—	2,000
Total work done	14,000	14,000	9,000	11,000
Previous periods		3,000	—	1,000
Current periods		11,000	9,000	10,000

(20) (b) Material A:

Price variance 50,000 (1.20 − 1.00) = 10,000 F
Quantity variance 1.20 (50,000 − 44,000) = 7,200 U

Material B:

Price variance 18,000 (.75 − .70) = 900 U
Quantity variance .70 (18,000 − 18,000) = 0

Labour:

Rate variance 10,200 (6.00 − 5.75) = 2,550 U
Efficiency variance 5.75 (10,200 − 10,000) = 1,150 U

OVERHEAD:

	Actual	Budget Actual	Budget Standard	Standard Applied
Variable	20,100	18,360	18,000	18,000
Fixed	40,000	39,000	39,000	50,000

	Spending	Efficiency	Denominator
Variable	1,740 U	360 U	—
Fixed	1,000 U	—	11,000 F

Page 2 of 6

8 Q. 3.

(6) (a) (1) Average inventory $400 + \dfrac{1{,}000}{2} = \underline{\underline{900}}$

(2) Reorder point $400 + (100 \times 7) = \underline{\underline{1{,}100}}$

(3) Normal maximum $400 + 1{,}000 = \underline{\underline{1{,}400}}$

(4) Absolute maximum $1{,}400 + 7(100 - 80) = \underline{\underline{1{,}540}}$

(5) Cost of placing orders:

$$EOQ = \sqrt{\frac{2AP}{S}}$$

$$1{,}000 = \sqrt{\frac{2 \times 250 \times 100 \times P}{1}}$$

$$1{,}000{,}000 = 50{,}000\,P$$

$$P = \underline{\underline{\$20}}$$

(2) (b) To compute the order quantity which minimizes total cost related to inventory:

P — the cost of placing orders — decreases in total as EOQ increases

S — the cost of carrying inventory — increases in total as EOQ increases

15 Q. 4.

	Finished Goods			
	June	July	Aug.	Sept.
Beginning inventory	1,500	2,500	2,250	1,250
Production	7,000	9,750	8,000	
	8,500	12,250	10,250	
Sales	6,000	10,000	9,000	5,000
Ending inventory	2,500	2,250	1,250	

	Material A		
	June	July	Aug.
Beginning inventory	7,000	9,750	8,000
Purchases	37,750	47,000	
	44,750	56,750	
Production	35,000	48,750	40,000
Ending inventory	9,750	8,000	

Cash Disbursements — July

Material A:

$1/3 \times 37{,}750 \times \$3.00 \times .98 = \$\ 36{,}995$

$2/3 \times 47{,}000 \times \$3.00 \times .98 = \ 92{,}120$

$\underline{\underline{\$129{,}115}}$

Page 3 of 6

14 Q. 5.

Stores

10,000	110,000
160,000	22,000
170,000	132,000
132,000	
38,000	

Work in Process

30,000	300,000
M 110,000	
L 180,000	
O 90,000	
410,000	
300,000	
110,000	

Finished Goods

50,000	200,000
300,000	
350,000	
200,000	
150,000	

Cost of Goods Sold

200,000	

Overhead Applied

	90,000

Overhead Control

22,000	
28,000	
35,000	
85,000	

Accrued Payroll

205,000	11,000
	180,000
	28,000
	219,000
	205,000
	14,000

Accounts Payable

173,000	25,000
	160,000
	185,000
	173,000
	12,000

(2) (a) $180,000

(2) (b) 300,000

(2) (c) 28,000

(2) (d) 173,000

(2) (e) 205,000

(2) (f) 110,000

(2) (g) 30,000

16 Q. 6. (a) Variances:

(6)

Direct materials (460,000 − 450,000)	=	10,000 U
Direct labour (625,000 − 600,000)	=	25,000 U
Variable overhead (370,000 − 375,000)	=	5,000 F
		30,000 U

Standard cost of inventory: 15,000 × $19.00 =	$285,000
Variances prorated to inventory: $\frac{15,000}{75,000} \times 30,000 =$	6,000
	$291,000

(5) (b) Total actual costs:

Direct materials	$ 460,000
Direct labour	625,000
Variable overhead	370,000
Fixed overhead	156,000
	$1,611,000

Actual cost of inventory:

$$\frac{15,000}{75,000} \times \$1,611,000 = \$322,200$$

(5) (c)

Actual direct materials	$ 460,000
Actual direct labour	625,000
Applied variable overhead (75,000 × $5.00)	375,000
Applied fixed overhead $\left(75,000 \times \frac{2 \times 60,000}{100,000}\right)$	90,000
Total cost	$1,550,000

Normal cost of inventory:

$$\frac{15,000}{75,000} \times \$1,550,000 = \$310,000$$

Page 5 of 6

12 Q. 7.

(3) (a) The underlying principle of responsibility accounting is that managers should only he held responsible for costs which they can control. In preparing segment income statements, the contribution controllable by segment managers is computed by deducting variable costs and discretionary fixed costs from the segments' revenue. Uncontrollable or joint fixed costs are excluded from this calculation.

(3) (b) Service department costs are allocated to producing departments so that service department costs will be included in the product cost for inventory valuation and income determination. Two methods are:
(1) direct;
(2) step.

(3) (c) (1) Cost to buy.

(2) Variable costs to make.

(3) Fixed costs which could be eliminated or used for some other purpose if the item were bought.

(3) (d) (1) entries on paydays to record payments to employees and liabilities for amounts deducted from employees' earnings.

(2) entries at the end of an accounting period to record and classify the employer's expense and liabilities both to the employees and to various government agencies and other funds.

(3) entries to record remittances to government agencies for both employees' and employers' contributions to Canada Pension Plan, Unemployment Insurance, Income Tax, etc.

100

END OF SOLUTIONS

CANADIAN CERTIFIED GENERAL ACCOUNTANTS' ASSOCIATION

FINANCIAL CONTROLLERSHIP 316 EXAMINATION

JUNE, 1980

Marks | Time: 3 Hours

Note:

Show all your calculations neatly. For those essay-type questions, please carefully outline your answer before starting to write it. Marks are allocated on the basis of the quality of the answer, not the amount written.

Four tables are attached.

16 Q. 1. Discuss the validity of the following statements:

(8) i) Leasing is a cost free method of hedging against obsolescence.

(8) ii) In certain cases, the standard deviation of an investment's cash flow is an inadequate measure of the investment's risk.

16 Q. 2. (a) Sunny Smile Ltd. announced on November 9 a rights offering of 60,000 new shares at a subscription price of $25. The rights offering is for shareholders of record as of January 15. The stock will go "ex-rights" on January 8, five business days before January 15. Four rights are required to purchase one new share and one right will be issued for each share outstanding on January 15. The market price of Sunny Smile Ltd. on November 9 was $29.

Assuming there are no changes in the market value of the stock except those due to the rights offering, calculate the following:

(4) i) The number of shares outstanding on January 15.

(4) ii) The market value of the stock during the ex-rights period.

(b) Sunny Smile Ltd. has warrants outstanding which are protected against dilution due to the rights offering. Each warrant entitles the holder the option to purchase five shares of common stock at $27.

With the information provided in Part A and assuming that the market value of the warrants equal their theoretical value, calculate the following:

(4) i) The value of the warrants before the rights offering.

(4) ii) The new exercise price of the warrants, i.e., the exercise price after the rights offering. Assume the theoretical value of the warrant remains unchanged after the rights offering.

10 Q. 3. Explain the difference between a captive finance company and a holding company.

10 Q. 4. If the appropriate discount rate is 14 percent, what is the present value of the following cash flow stream:

Year	1	2	3	4	5	6	7	8	9
Cash Flow	—	—	$2,400	$2,400	$2,000	$2,000	$4,000	$4,000	$4,000

17 Q. 5. The Fezz Company Ltd. is considering the replacement of one of its machines which was bought 3 years ago for $5,000 and has a current book value of $1,715. The existing machine can be operated for the next five years after which it is expected to have a zero terminal value. A new machine with an expected life of five years can be purchased to replace the existing machine for $9,000. The new machine is expected to provide cash savings before depreciation and taxes of $3,000 per year for the next five years and have a salvage value of $2,500.

Both machines qualify for a CCA rate of 30 percent, the tax rate is 40 percent and the after-tax cost of capital is 18 percent.

Assuming that the old machine can be sold for $1,500 answer the following:

(6) i) calculate the present value of the **after-tax cash savings** before depreciation.

(3) ii) calculate the present value of the tax shelter due to the CCA associated with the replacement of the old machine.

(8) iii) calculate the NPV associated with the replacement of the old machine.

10 Q. 6. Briefly explain the main reasons why Canadian manufacturing enterprises hold cash and marketable securities.

9 Q. 7. Explain **three** main characteristics which make the corporation different from the partnership or sole proprietorship.

12 Q. 8. Stock A offers a 1% dividend yield and 13% capital appreciation, while stock B offers a 13% dividend yield and 1% capital appreciation.

From an investor's viewpoint, discuss the **three** main factors which make the 14% expected return on stock A different from the 14% expected return on stock B.

100

END OF EXAMINATION

CANADIAN CERTIFIED GENERAL ACCOUNTANTS' ASSOCIATION

FINANCIAL CONTROLLERSHIP 316 EXAMINATION

JUNE, 1980

SUGGESTED SOLUTIONS

Marks | Time: 3 Hours

16 Q. 1. (8) i) This statement is not valid. The higher risk of obsolescence is passed on to the lessee in the form of higher lease payments.

(8) ii) The statement is correct. The use of σ when comparing risks of probability distributions with different expected values may yield misleading results. The best procedure for eliminating this problem is to divide σ by the expected value of the probability distribution to obtain the coefficient of variation.

16 Q. 2. (a) i) If four rights are required to purchase one new share, there is one new share for each four old shares. Thus, there are 4 × 60,000 = 240,000 shares outstanding.

Marks

4 for correct answer.

ii) The value of a right (R) is given by

$$R = \frac{Po - S}{N + 1}$$

$$= \frac{29 - 25}{4 + 1} = \$\ .80$$

The value of the stock ex-rights is:

$$Px = Po - R$$

$$= 29 - .80 = 28.20$$

Marks

(3) for calculating correctly the value of the right
(1) for correct answer
4

(b) i) The market value of the warrants equal the theoretical value W, which is:

$$W = N(Po - S)$$

$$= 5(29 - 27)$$

$$= 10$$

Marks

4 for correct answer.

ii) The value of the warrant must remain unchanged after the rights offering. Since the market value of the stock after the rights offering is $28.20, the new exercise price of the warrant is found as follows:

$$10 = 5\ (28.20 - S)$$

$$S = 26.20$$

Marks

4 for setting up the problem correctly.

Page 1 of 3

10 Q. 3. A captive finance company is a subsidiary established by a manufacturing concern producing high cost equipment with the purpose of providing customers with term financing in the purchase of the firm's products.

A holding company is a company which holds controlling interest through majority shareholdings in other companies.

Marks

(5) for recognizing what a captive finance company is
(5) for recognizing what a holding company is.
10

10 Q. 4. The PV of the cash flow stream may be calculated as follows:

$$PV = 2{,}400\ (2.914 - 1.647) + 2{,}000\ (3.889 - 2.914) + 4{,}000\ (4.946 - 3.889)$$
$$= 3{,}040.8 + 1{,}950 + 4{,}228$$
$$= \$9{,}218$$

17 Q. 5. i) The PV of the after-tax cash savings is calculated as follows:

$$= (1 - \text{tax rate}) \times \text{PV of } \$3{,}000 \text{ annuity}$$
$$= (1 - .4) \times 3.127 \times 3{,}000$$
$$= \$5{,}628.6$$

Marks

(3) for correct tax adjustment
(3) for correct interest factor
6

ii) The PV of the tax shelter due to CCA is calculated as follows:

$$= C\ \frac{dT}{k+d}$$

where C is the incremental undepreciated capital cost of the asset pool

$$= (9{,}000 - 1{,}500) \times \frac{.3 \times .4}{.18 + .3}$$
$$= 7{,}500 \times .25$$
$$= \$1{,}875$$

Marks

3 for correct answer.

iii) NPV = PV of after-tax savings + PV of tax shelter due to CCA + PV of salvage value — PV of tax shelter foregone — C

$$NPV = \$5{,}628.6 + \$1{,}875 + .437 \times 2{,}500 - .437 \times 2{,}500 \times \frac{.3 \times .4}{.3 + .18} - 7{,}500$$
$$= 5{,}628.6 + 1{,}875 + 1{,}092.5 - 273 - 7{,}500$$
$$= \$823.1$$

Marks

(3) for correctly calculating the PV of the salvage value
(3) for correctly calculating the PV of the tax shelter foregone at t=5
(2) for discounting the tax shelter foregone at t=5
8

10 Q. 6. The reasons for holding cash are: transactions, precautionary, speculative and finance motives. Firms hold marketable securities for these four reasons and to obtain an additional return.

9 Q. 7. These reasons are:

— limited personal liability
— easy transfer of ownership
— shareholders are not necessarily agents of the company or other shareholders
— shareholders are not taxed on the undistributed income of the company

Marks

3 for each reason recognized correctly.

12 Q. 8. The three main differences in the two investment returns are uncertainty, liquidity and tax treatment.

Returns expected to materialize in the form of capital gains are more uncertain than those stemming from dividend payments. Dividend income is available as liquid funds to the investor, whereas capital gains become liquid only after the sale of the stock. Finally, dividend income is taxed differently than capital gains.

100

END OF SOLUTIONS

CANADIAN CERTIFIED GENERAL ACCOUNTANTS' ASSOCIATION

INFORMATION AND COMPUTER SYSTEMS 325 EXAMINATION

JANUARY, 1980

Marks

Time: 3 hours

15 Q. 1. Define the following terms:

(3) (a) ANSI

(3) (b) Blocking factor

(3) (c) Conversational mode

(3) (d) Instruction set

(3) (e) Multiprocessing

25 Q. 2. An important part of ABC's salary payroll system is a program to compute earnings. The program's purpose is to combine the monthly salary transaction data with the salary master file in a magnetic tape environment. The functions required of this program are to print a payroll register, a deduction register and the salaried employee's cheques and earning statements. A typical salaried employee has a payroll identification number, a basic salary, added pay (if any), and various deductions. The deductions include income tax, UIC, pension, disability insurance, and other miscellaneous deductions.

Required:

(5) (a) Specify the inputs, outputs and files to be used by this program.

(5) (b) Specify the possible error conditions that might be encountered in paying a salaried employee. How are these error conditions determined?

(15) (c) Draw a logic diagram (**not** a system flowchart) which illustrates the steps employed in performing this program. Be sure to describe each step of the logic flowchart.

10 Q. 3. Discuss the concept of Virtual memory, how it relates to storage management, and its advantages and disadvantages.

10 Q. 4.

(2) (a) Differentiate between the process of assembling and compiling source languages into machine languages.

(2) (b) Draw a flowchart of either the assembly or compiling process.

(6) (c) What are the reasons for using:
i) assembly languages
ii) compiler (high level) languages

15 Q. 5.

(5) (a) What are the subsystems that would comprise a personnel information system? Describe these subsystems in terms of their data content and the types of reports that might be provided to the tactical level of management.

(5) (b) What are the factors that have caused personnel information systems to be the least automated of the various information systems in an organization?

(5) (c) Describe how a large company, e.g. Bell Canada, might develop a computerized personnel information system. Include the types of subsystems you believe ought to be included in such a system.

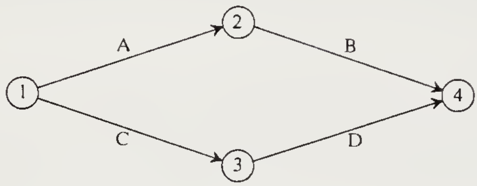
PAGE 1 OF 2

10 Q. 6. (a) Calculate the Economic Order Quantity (EOQ) and average total cost per year for the following data:

	Yearly Sales Volume	Order Cost	Unit Cost	Annual Holding Cost (as a % of Unit Cost)
(5)	500	$6	$10	25%

(5) (b) For the data given in part (a) above what is the average total cost per period if the order quantity is 10% above the EOQ. Is it worth the effort to be extremely precise in determining the EOQ?

15 Q. 7. The PERT network below uses a weighted average of three times, optimistic, most likely, and pessimistic to calculate expected time for a particular job's completion.



JOB	TIME t_o	t_m	t_p	Crash Cost to Reduce a day's time
A 1,2	10	20	90	300
B 2,4	20	40	120	200
C 1,3	20	40	180	100
D 3,4	20	30	100	200

Required:

(6) (a) Determine (i) T expected;
(ii) T earliest;
(iii) T latest;
for each node on the network.

(4) (b) Give the critical path and the slack time on the non-critical path.

(5) (c) Suppose you could receive $150 for each day you could complete the job earlier than the expected time. How many days could you eliminate? Where?

100

END OF EXAMINATION

PAGE 2 OF 2

CANADIAN CERTIFIED GENERAL ACCOUNTANTS' ASSOCIATION

INFORMATION AND COMPUTER SYSTEMS 325 EXAMINATION

JANUARY, 1980

SUGGESTED SOLUTIONS

Marks

Time: 3 hours

15 Q. 1.

(3) (a) **American National Standards Institute, Inc. (ANSI).** American group which establishes standards of different types for use by government and business. One of the standards involves symbols for flowcharting and logic diagramming.

(3) (b) **Blocking factor.** Number of records blocked together. For example, a blocking factor of four means that four records are recorded as one continuous block. Applies to both magnetic tape and DAS storage.

(3) (c) **Conversational mode.** Status of a computer when it is being used in an interactive manner. The user and the computer "converse" with each other through the terminal.

(3) (d) **Instruction set.** Group of instructions which a computer can perform. The computer is built to recognize and process, using the control unit of the CPU, a certain number of unique instructions — such as read a card, multiply, print a line, etc.

(3) (e) **Multiprocessing.** Inter-connection of two or more central processing units. Very often one CPU (the largest) controls the others. The multiprocessing configuration permits a realtime or time-sharing system to handle peak transaction loads and to maintain uninterrupted operation when CPU becomes overloaded or inoperative.

25 Q. 2.

(5) (a) files, inputs and outputs

(i) files — Payroll master file
Payroll transaction file

note: other files, such as archeival, may be included.

(ii) inputs — salary payroll records
additional salary records

(iii) outputs — payroll register
proof listing
deduction register
cheques
earning statements
quarterly summaries (e.g. DNR tax report)
annual summaries

(5) (b) Possible error conditions.
The student is expected to consider the possible error conditions that may be involved in this processing. The text noted the possibility of invalid employee numbers or department numbers. Deduction codes should be checked for validity. If the salaried employee has additional income forthcoming, a limit check **should** be made to assure that additional pay isn't too large. Note — this list isn't meant to be exhaustive; the student may produce other correct error conditions. The student is expected to demonstrate a knowledge that errors in a data will occur, and that a good logic diagram will test for them.

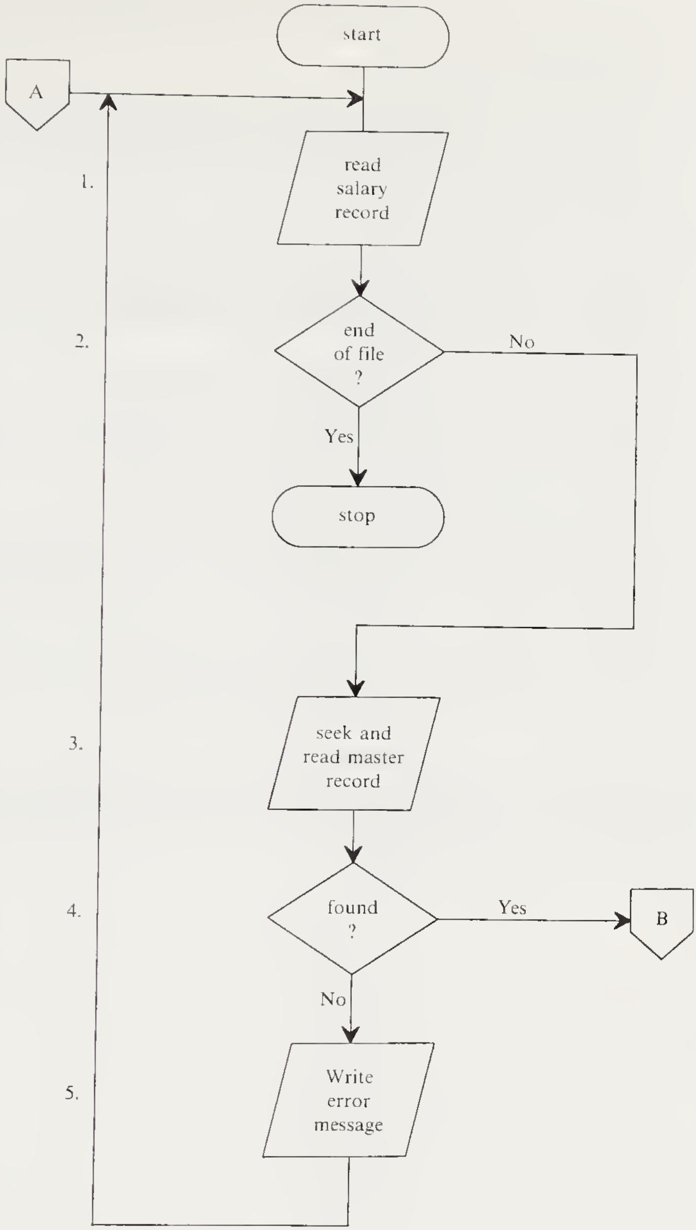
(15) (c) Logic Diagram. The logic diagram illustrates the logic and processing steps employed by the computer in performing the compute earnings program. (see next page)

1. The first record is read from the salary transaction file.
2. The program tests for an end-of-file condition on the time record file. This condition only exists **after** the last record in the file has been read **and** processed.

   If the end of the file has been reached, the program executes the end-of-job routine, which includes rewinding the output tape and printing out control totals. Those processes are not shown on the logic diagram.
3. If the end of the time record file was not reached in Step 1, the employee number from the time record is used to seek out the corresponding master record in the payroll master file. The master record is read into main storage.
4. If the record was found in Step 3, the program branches to Step 6 to process that record.

   If the master record was not found, the program branches to an error routine (Step 5).
5. An error message is written on a DAS device or a magnetic tape for later processing.

   After the error message is written, the program branches back to Step 1 to read the next time record.


start
A
1.
read salary record
2.
end of file ?
No
Yes
stop
3.
seek and read master record
4.
found ?
Yes
B
No
5.
Write error message

6. When the appropriate master record has been located current gross earnings are computed by executing the following steps:
   (i) extend salary
   (ii) compute any additional pay

7. Current income tax is computed by multiplying current gross earnings by an income tax percentage. This percentage is determined by analyzing the tax class code located in the master record. The current income tax is added to the previous year-to-date income tax to update the year-to-date tax.

8. Compute other deductions.

9. Miscellaneous deductions (savings bonds purchases, credit union deposits, charity contributions, etc.) are deducted by analyzing deduction codes and using deduction amounts from the master record. Year-to-date deductions are updated by adding the current amounts to the previous totals for each deduction.

10. Descriptive data from the input records which are required to complete output records are moved from the input areas to the output areas.

    After all computations have been performed and the three output record areas in storage have been completely updated, the output records are written in Steps, 11, 12 and 13.

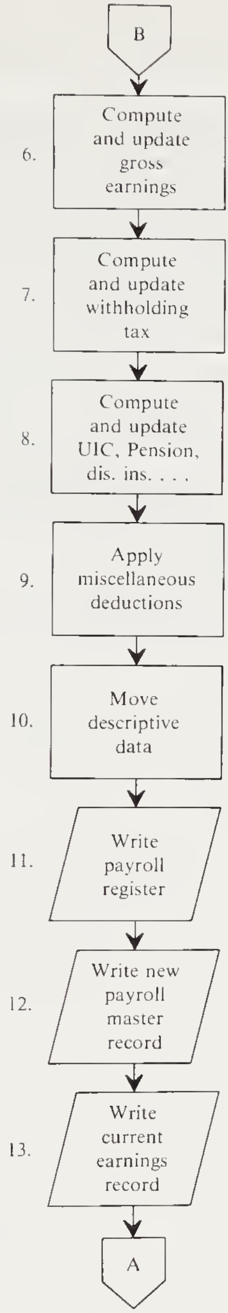
11. A line entry is printed on the payroll register for each employee.

12. A new payroll master record containing the updated data is written back on the DAS file.

13. The current earnings record is written on magnetic tape. The program branches back to Start and the next employee time record is read and the process is repeated until an end-of-file condition is sensed.

Note: As the current and new year-to-date amounts in Steps 6 through 10 above are computed, they are moved to the output areas in main storage where the output records (updated payroll master, current earnings, and payroll register) are being formed.

NOTE TO MARKER: This narrative and logic diagram is quite comprehensive. The student is expected to write major portions of the diagram, e.g., reading transaction and master records, testing for end of file conditions, computing salary, computing deductions, writing outputs, returning to seek the next record, and when appropriate, terminating the program. The level of detail shown above is not required to receive full marks.


B
6.
Compute and update gross earnings
7.
Compute and update withholding tax
8.
Compute and update UIC, Pension, dis. ins. . . .
9.
Apply miscellaneous deductions
10.
Move descriptive data
11.
Write payroll register
12.
Write new payroll master record
13.
Write current earnings record
A

PAGE 5 OF 9

10 Q. 3. The basic concept of the virtual memory is to allow the programmer to write programs with the various pieces of equipment and their vastly differing costs and speeds "transparent". In this way he or she programs with the feeling that the entire computing system is entirely at the disposal of the application being programmed.

When the program is processed, the programmer has the feeling that all required characters are available to the program in one large contigous block of storage. In fact the available core storage may not be able to hold the program. Thus only a part of the program is usually in core. The remaining portion of the user's program must be read in when needed and sent back to secondary (auxiliary) storage when other programs need the available core memory space.

Under ideal conditions the use of virtual memory avoids the problems of overlays and program segmentation that used to plague programmers. Previously the programmers had to write program overlays to fit the actual hardware dimensions of core memory available.

Some disadvantages to using virtual memory systems are:

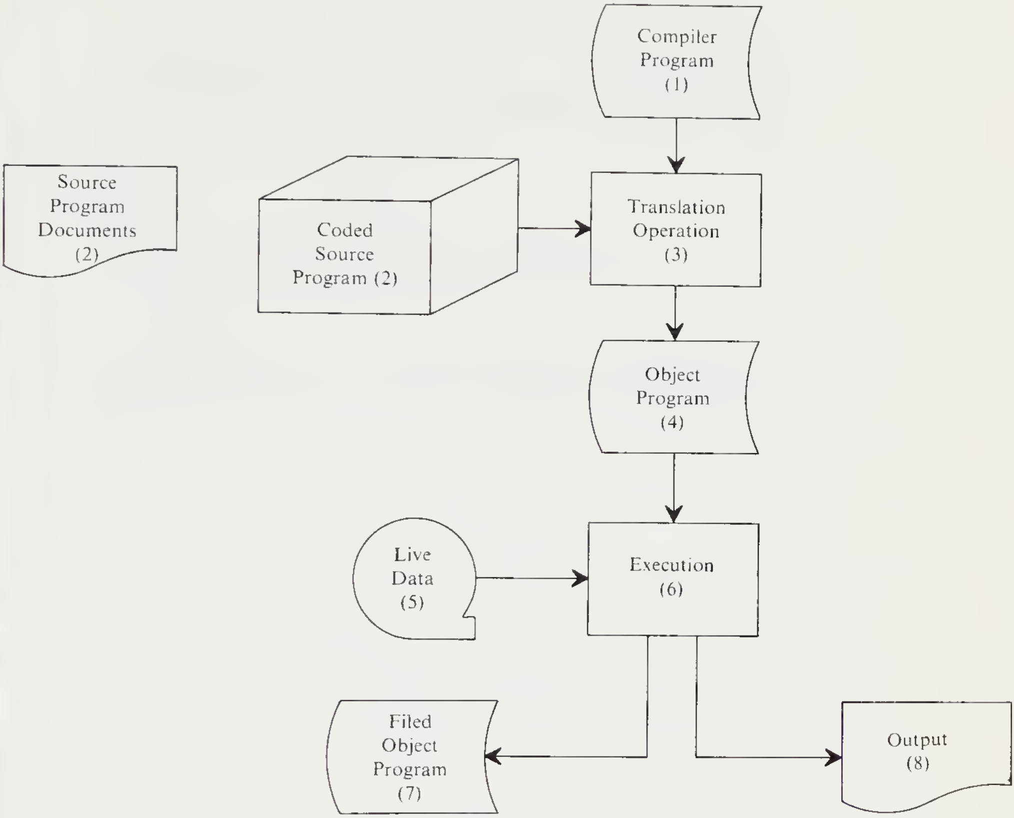
(i) the possibility of an inefficient use of hardware, both in terms of response time and amount of paging, and

(ii) the requirement of a more sophisticated operating system and more memory.

10 Q. 4. The primary difference between assembling and compiling source languages into machine language (object code) is the 1:1 vs. 1: many source code to machine instructions respectively. The diagram below shows the compilation process. The assembly process would be illustrated by having the word assembler replace the word compiler.

Assembly languages are used primarily to gain efficiency in machine processing, while compiler (or high level) languages which are more English-like, are used because of their ease of learning, better documentation, machine independence and savings in coding and debugging time.

Compile Process



PAGE 7 OF 9

15 Q. 5.

(5) (a) A personnel information system is designed to provide information to tactical management so that the firm's needs can be matched with the available people. This information system should consist of the following subsystems:

(i) Personnel Inventory — includes all pertinent information about each person currently employed by the firm, such as name, marital status, performance evaluations, education, job experience, etc.

(ii) Corporate Personnel Forecast — includes projected personnel needs in each major skill area and the education, training, and experience needs for each position within the firm.

(iii) Recruiting and Training — Planning and Control — includes sources for new personnel within each major skill area, the success history of personnel recruited from each source, training practices for each skill area, success history of various training procedures, and termination history.

(5) (b) There are several reasons for the continued use of manual methods. The most important is the psychological factor of dehumanization, i.e., personnel "decisions" will be made by an impersonal computer. Another reason for lack of automation is that the human elements which are the major concerns of a personnel information system are difficult to quantify.

(5) (c) A large company might develop a computerized personnel data system containing:

(i) Basic Personnel Profile — basic data on each employee including name, address, birth date, marital status, when first employed, where employed in company, salary, and highest educational level achieved.

(ii) Personnel Skills inventory — includes all the career-oriented skills of each employee. This information may be divided into groups such as (1) technical, (2) administrative, etc. Special skills are also recorded such as language proficiency and experience with specialized equipment.

(iii) Education Objectives and Attainment — includes information concerning an employee's formal education, both past and planned.

(iv) Recruitment Information System — includes information on the job qualifications of applicants.

Computerized systems for personnel planning and placement can greatly improve the management function by providing up-to-date, career-oriented information which is available on a company-wide basis.

10 Q. 6.

(5) (a) (i) $EOQ = \sqrt{\dfrac{2 \times 500 \times 6}{10 \times .25}} \cong 49$

(ii) $TC = \dfrac{500 \times 6}{49} + \dfrac{.25 \times 10 \times 49}{2} = \$122.47$

(5) (b) (i) order quantity $= 49 + .10\ (49) \cong 54$

(ii) $TC = \dfrac{500 \times 6}{54} + \dfrac{.25 \times 10 \times 54}{2} = 55.56 + 67.50 = 123.06$

In general, because the Total Cost curve is relatively flat around the optimum level, it is not worth the effort attempting to be very precise with the data.

15 Q. 7.

(6) (a)

	t_e	T_E	T_L
A	30	30	50
B	50	80	100
C	60	60	60
D	40	100	100

(4) (b) Critical Path C, D, (1, 3, 4) is expected to be 100 days. Slack on AB is 20 days.

(5) (c) You would crash 20 days along C (1, 3). Then you would have two critical paths on the system. You would not crash the system any further because of excessive costs.

100

END OF SOLUTIONS

CANADIAN CERTIFIED GENERAL ACCOUNTANTS' ASSOCIATION
INFORMATION AND COMPUTER SYSTEMS 325 EXAMINATION
MARCH, 1980

Marks | | Time: 3 Hours

15 Q. 1 Define following terms:

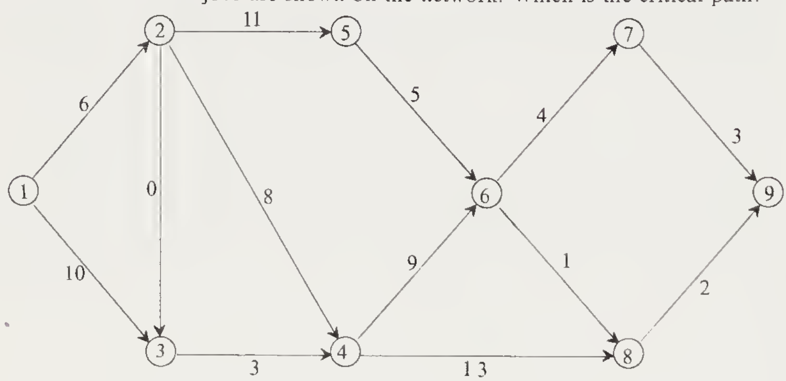
(4) a) Assembler Language
(4) b) Database Management System (DBMS)
(3) c) Facilities Management
(4) d) Index Sequential

10 Q. 2 Data entry labour costs are rising at approximately 10% per annum. What should a company's management do to alleviate this increasingly expensive situation? Give two specific examples.

15 Q. 3 How is the systems analysis phase distinguished from the systems design phase. Outline the activities which take place under each phase.

10 Q. 4 Explain the differences between on-line computing and batch processing systems. Outline the conditions under which one approach would be more preferred than the other one.

10 Q. 5 Complete a tabular calculation of the following network, showing T_e, the earliest expected time for an event, and T_L, the latest allowable, and the slacks for each of the jobs. The times for the jobs are shown on the network. Which is the critical path?



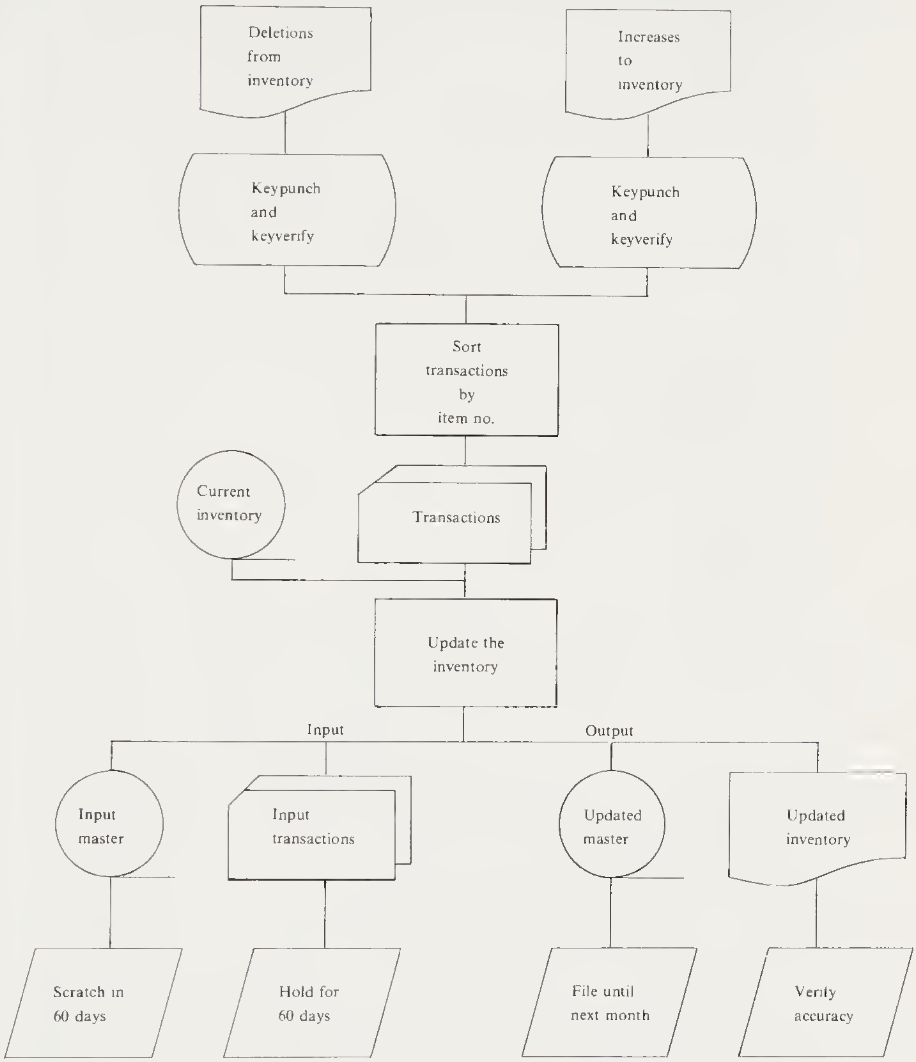
10 Q. 6 List the possible systems costs and systems benefits one has to measure when conducting a cost benefit analysis.

5 Q. 7 Explain the differences between system flowcharts and program flowcharts.

15 Q. 8 Below is a flowchart describing a monthly inventory updating system.

Required:

Examine the flowchart and select the best answer to the questions following the flowchart.



(2) 1) The master file for this system is on which type of input medium?
a) magnetic tape
b) punched cards
c) disk packs
d) paper tape

(2) 2) On which medium are the input transactions recorded?
a) magnetic tape
b) punched cards
c) data cell
d) disk packs

(2) 3) How many programs are used in the system?
a) 1
b) 2
c) 3
d) 4

(1) 4) Can this system be handled by unit record equipment?
a) yes
b) no

(2) 5) How large is the master file?
a) over 100,000
b) the information is not in the chart
c) less than 50,000
d) 1,000

(1) 6) In what flow is the chart done?
a) horizontal
b) vertical
c) combination
d) neither

(2) 7) What is the minimum number of tape drives required to do this system?
a) 1
b) 2
c) 3
d) 4

(1) 8) How long is the old master file retained before it is scratched?
a) 1 month
b) 60 days
c) the chart does not contain this information
d) it is scratched immediately

(1) 9) Does this system have any printed output in it?
a) yes, the deletions and increases to memory
b) no
c) sometimes
d) yes, a listing of the updated inventory

(1) 10) What is the ultimate disposition of the input transactions cards?
a) filed permanently
b) held for 60 days
c) scratched in 30 days
d) thrown out immediately

10 Q. 9 What is an audit trail, and what is meant by an invisible audit trail in real-time processing? Give an example of an invisible audit trail in real time processing.

100

END OF EXAMINATION

CANADIAN CERTIFIED GENERAL ACCOUNTANTS' ASSOCIATION
INFORMATION & COMPUTER SYSTEMS 325 EXAMINATION
MARCH, 1980
EXAMINER'S COMMENTS

Specific

Q.1 (a) Some people were confused between Assembly Language and an assembler. An assembler is a program written for the translation of Assembly Language into machine language, whereas, Assembly Language is a programming language used in writing a computer program.

(b) Almost all candidates failed to recognize that a Database Management System is controlled by a set of computer programs.

(c) Mostly well done. Some candidates interpreted the definition of "Facilities Management" as the management of the physical assets of an organization.

(d) Most people failed to recognize "Index Sequential" as a method of data organization. Only a few people knew the term ISAM.

Q.2 Some people failed to mention the causes for the increase in data entry labour costs.

Only partial credits were given to the following examples;

(i) Operating System (OS);
(ii) Management Information System (MIS);
(iii) Database Management System (DBMS);

because these system changes are not aiming at reducing data entry labour cost, but, nevertheless, reduction in data entry labour cost may occur as a byproduct.

The two specific examples should have been oriented towards technological changes rather than human behavioral changes.

Q.3 This question was generally poorly answered. In many of the cases there was a lack of explanation for each step of systems analysis and design. In some cases the differentiation between the two phases was not clearly stated. The most common error was to consider the steps of the 'systems approach' for the analysis phase and then add additional steps for the design phase.

Q.4 This question was generally well answered. The distinction between on-line and batch systems was clear in the vast majority of the answers. The answers varied in explaining the difference in terms of software, hardware and/or management factors. The second part of the question, was not well answered. The conditions to use one or another type of system were not considered in many students' answers.

Q.5 The critical path network question was generally well answered. Almost all students were able to determine the critical path. However, some students had difficulties in determining the slacks for each job. Here it is important to realize that the slack pertains to a particular job, because it is this slack time that allows some freedom in the scheduling of resources.

Q.6 The question concerning system costs and system benefits was adequately answered. Most students were able to list some items affecting either costs or benefits. Few students considered the role of intangibles in either costs or benefits. These intangibles are often important, although not easily measured in dollars e.g., such items as fear of organizational change or increased customer service would be intangibles. A few students got on the wrong track in answering the various ways a company could finance a computer; rent, lease, buy, etc., or specifically discussing the inventory problem. When these answers could be related back to the question, some marks were granted.

Q.7 The system vs. program flow chart question was very well answered. Some students mixed up the two types of flow charts, and others utilized the correct definitions, but the wrong symbols.

Q.8 The multiple choice question concerning the flow chart was very well answered. The only part of the question that caused difficulty was in the minimum number of tapes required to process the system. Recall from the exam, that the inventory master is on 1 tape and the updated inventory master is on a second tape. The transactions for the period are on punched cards. Thus, two tapes are the minimum possible for this system.

Q.9 The question concerning audit trail was not well answered. While most students were able to define an audit trail, there were some misconceptions about an invisible audit trail and about an audit trail in real time processing. The concept of an invisible trail simply means not visible to a human. Thus, an invisible audit trail exists in both batch and real time processing. With real time processing however, since the process of updating the master file involves writing over (and thus destroying) the previous record, special actions are required to preserve the trail. Few students, who understood that the real time updating destroys the previous data, mentioned that a before and/or after master log as well as a log of the transaction are required to preserve the audit trail.

CANADIAN CERTIFIED GENERAL ACCOUNTANTS' ASSOCIATION
INFORMATION AND COMPUTER SYSTEMS 325 EXAMINATION
MARCH, 1980
SUGGESTED SOLUTIONS

Marks | Time: 3 Hours

15 Q. 1

(4) a) A programming language that utilizes symbols to represent operation codes and storage locations. It is a machine oriented translator language.

(4) b) A generalized set of computer programs which control the creation, maintenance and utilization of the data bases and data files of an organization.

(3) c) The use of an external service organization to operate and manage the EDP facilities of an organization.

(4) d) A method of data organization in which sequentially ordered records are also referenced by an index. When utilized in direct access, the organization is known as index sequential access method (ISAM).

10 Q. 2 Managers first need to recognize that data entry is a highly people-oriented process, error prone, monotonous and increasingly expensive. There are a variety of ways to reduce data entry costs and simultaneously reduce monotony and errors at data entry time.

These include:

a) taking advantage of key-to-disk technology which allows for on-line editing of data at the entry stage.
b) Reduce the number of procedures and inherent delay required for source data preparations.
c) eliminate human intervention in the data entry process by source document readers (e.g., MICR, OCR) and point of sales (P.O.S.) recording. An example of this latter approach would be the use of scanning machines in retail outlets which automatically gather product data.

(Note to marker: this answer is not meant to be exhaustive; students may correctly discuss other ways management can cope with the increasing costs of data entry. Examples should illustrate students understanding.)

15 Q. 3 Systems analysis is a process whereby the analyst and/or manager
i) defines the problem;
ii) organizes for the systems analysis study;
iii) gathers pertinent data, and
iv) analyses the data so as to determine the information requirements for the organization.

Systems design is the second phase in the analysis / design / implementation / execution process. The following activities take place in system design:
i) determine the new system requirements;
ii) develop alternative solutions to these requirements;
iii) test the alternative solutions, and
iv) select the best (preferred) solution.

10 Q. 4 On-line is where the clerk or a programmer is directly connected to the computing system. Each single transaction or line of code is entered without grouping them together. The computer system provides responses to each single entry.

Batch processing, as contrasted to on-line, requires the grouping of data into a batch of transactions to await processing at a future, pre-determined time. Batch processing is characterized by delay and sorting of items into sequence prior to processing. The major rationale for on-line vs batch computing is the benefits to be received from rapid responses to demand for information. If such a response is required by the business situation, then the extra costs of on-line hardware, software, and their complexity are justified.

10 Q. 5 Solution.

Successor Event	Predecessor Event	Job Time	T_E	T_L	Slack
9	8	2	29	30	1
	7	3	30		0
8	6	1	24	28	4
	4	13	27		1
7	6	4	27	27	0
6	5	5	22	23	1
	4	9	23		0
5	2	11	17	18	1
4	3	3	13	14	1
	2	8	14		0
3	2	0	6	11	5
	1	10	10		1
2	1	6	6	6	0

Critical path is 1 - 2 - 4 - 6 - 7 - 9

10 Q. 6 Strictly speaking the process or cost / benefit analysis as applied to a study are to measure each alternative as to its costs and compare the costs of each system with the potential benefits, both tangible and intangible.

Costs are usually measured in dollar terms. However, costs may also be measured in terms of risks, disruption of an organization, fear of change by affected personnel, etc. Benefits include the tangibles such as increased revenues, decreased costs as well as intangibles. The intangibles include a variety of benefits such as increased customer service, faster information processing, managerial information for decision making, etc. The intangibles are so named because of the difficulty in quantifying them in dollar terms.

5 Q. 7 System flowcharts are diagrams depicting major information flows in an organization. These include I/O symbols relating to specific media such as cards, printed output, video displays, tapes; storage symbols such as disks and drums; activity symbols for major sets of items such as merging, sorting, extracting, collating, storing; manual and auxilliary operations; and communications links.

Program flowcharts are detailed diagrams (logic or block diagrams) which include decisions, preparations, predefined processes, terminal points in a process, etc. Certain symbols are basic to both program and system flowcharts. These symbols include generalized I/O, process, comments, directional arrows, and connectors.

15	Q. 8	
	(2)	1 — A
	(2)	2 — B
	(2)	3 — A
	(1)	4 — B
	(2)	5 — B
	(1)	6 — B
	(2)	7 — B
	(1)	8 — B
	(1)	9 — D
	(1)	10 — B

10 Q. 9 An audit trail is the presence of data processing media which allow a transaction to be traced through all stages of processing. The invisibility of the audit trail comes from its existence in computer media which is not in the form of visual records. This invisibility is particularly relevant in real-time processing where transactions destroy the previous data on files. These special precautions are necessary to preserve the invisible audit trail.

100

END OF SOLUTIONS

CANADIAN CERTIFIED GENERAL ACCOUNTANTS' ASSOCIATION

INFORMATION AND COMPUTER SYSTEMS 325 EXAMINATION
JUNE, 1980

Marks | Time: 3 Hours

15 Q. 1 Define the following terms

(4) a) Audit trail
(4) b) Blocking
(4) c) Data Channel
(3) d) Check digit

10 Q. 2 What is a canned program (also known as software packages or packaged programs)? What are the possible advantages and disadvantages to using a canned program?

10 Q. 3 What does the term "machine-independent" mean? Give some reasons for why this concept is important for the data processing manager.

10 Q. 4 Explain the differences between programmed versus non-programmed decision making. Which type of decisions are easier to handle from a management Information System design point of view and why?

10 Q. 5 What is meant by people or user oriented systems analysis and design? How can a systems analyst assure that the system which is being developed is people or user oriented?

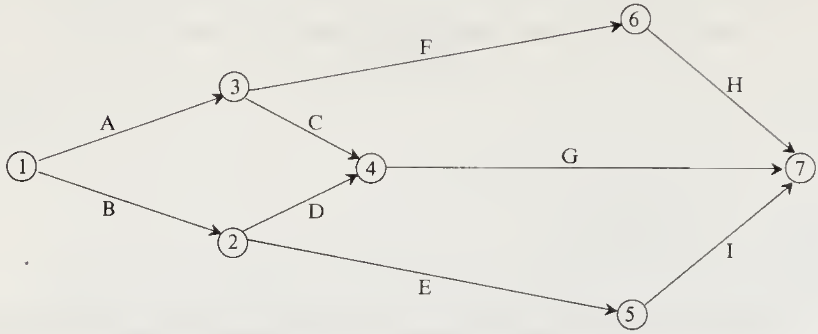
20 Q. 6 Prepare a *system flowchart* for the processes described below:

1. The organization uses the payroll transactions to update both
   a) the payroll master file, which is maintained on magnetic tape and is accessed sequentially, and
   b) work-in-progress master file, which is maintained on magnetic disk and is accessed directly (randomly).

2. Data from job time tickets are keypunched and verified on cards. These data on the cards are then read into the computer and put on magnetic tape. Using the employee number as the key, the data on magnetic tape is sorted. The sorted tape is then used to update the payroll master and work-in-progress master files. This updating run generates the following:

   a) a payroll register which is stored on magnetic tape
   b) employee paycheques,
   c) employee earning statements,
   d) error report showing incorrect transactions, and
   e) managerial summary information.

15 Q. 7 Analyze the network shown below with the data given in the table:



JOB	TIME (days)	COST ($)
A	5	4,000
B	5	4,000
C	10	15,000
D	7	3,500
E	5	10,000
F	7	14,000
G	5	5,000
H	10	20,000
I	10	30,000

Required:

Find the critical path and set up a job and cost schedule. Assume that the costs for each job are consumed uniformly: i.e., job A takes $800. each day.

10 Q. 8 In the data hierarchy, the concept of the file was discussed.

(4) a) What is a file and how does a file fit into the data hierarchy?

(6) b) Give four examples of different types of files, and briefly describe each example.

100

END OF EXAMINATION

CANADIAN CERTIFIED GENERAL ACCOUNTANTS' ASSOCIATION
INFORMATION & COMPUTER SYSTEMS 325 EXAMINATION
JUNE, 1980
EXAMINER'S COMMENTS

Specific

Q.1 The 4 definitions were generally well answered. (a) Audit trail - some students confused the concept of back up, e.g., the Grandfather, Father, Son system of file back up directly with the audit trail. Good back up allows the records to be recreated, but back up is not an audit trail per se. (b) Check digit - some students mixed up a check digit with a parity bit.

Q.2 Most students knew the concept of canned programs. However, some students had difficulty in discussing the advantages and disadvantages of this type of purchased software.

Q.3 The question on the term 'machine dependent'was not well answered. Many students got off on the wrong track, discussing concepts such as operating systems, new computer procedures, etc. In general the students who grasped the concept of higher level 'machine independent' computer languages such a COBOL, did very well.

Q.4 This question on programmed vs. non-programmed decision making was generally well answered. Some students got off on the wrong track by discussing the various levels of decision making in the organization, such as operational control, management control and strategic planning. It is possible to have both programmed and non-programmed decision making at all levels of management. Thus, e.g., it is possible to have non-programmed operational control decisions and programmed strategic planning decisions.

Q.5 This question concerning people oriented systems analysis and design was very well answered. Some students failed to consider that humans both produce and use information.

Q.6 The question on preparing a system flow chart was well answered by most students. Some students had problems in the following ways:

- Some confused a system flowchart and a program flowchart. Here the students utilized program flowchart symbols where system flowchart symbols were required.
- Some students utilized incorrect flowchart symbols. E.g., students sometimes used a type (sequential media) symbol for the work in process master file (which was a direct access storage media).
- Finally some students showed the same tape file as both input to and output from the update run. Two separate tapes are required here.

Q.7 The question on CPM caused little difficulty. Almost all students were able to correctly determine the Critical Path. Part (b) however, which asked for a schedule of activities wasn't so well answered. Some students only made up a time and cost schedule from the Critical Path, when it was appropriate to provide a complete schedule.

Q.8 Most students answered the question on files with little difficulty. Some students failed to define a file and place it in the data hierarchy. The second part of the question asking for types of files caused some confusion. Therefore, credit was granted for:

(a) types of files such as transaction and master;
(b) functional types of files such as payroll and accounts receivable; and,
(c) types of file organization methods such as direct and sequential.

CANADIAN CERTIFIED GENERAL ACCOUNTANTS' ASSOCIATION
INFORMATION AND COMPUTER SYSTEMS 325 EXAMINATION
JUNE, 1980
SUGGESTED SOLUTIONS

Marks **Time: 3 Hours**

15 Q. 1

(4) a) The audit trail is the presence of data processing media and procedures which allow a transaction to be traced through all stages of data processing from source document to final output.

(4) b) Blocking is the combining of several logical data records into physical blocks to increase the efficiency of input, output and storage operations.

(4) c) A channel is a path along which signals may be sent. Usually it is a separate processor which controls the movement of data between the CPU and I/O devices.

(3) d) A check digit is a digit in a data field for the purpose of finding errors or loss of characters in the data field as a result of data transfer operations.

10 Q. 2 Canned programs are computer software that is supplied by computer manufacturers or other independent software suppliers.

The advantages include:

(5)

a) reducing the need for expensive and time consuming effort required to develop user-written programs;
b) minimizing the number of in-house programming staff;
c) canned programs are often more efficient because of their development by specialists.

The disadvantages include:

(5)

a) often canned programs are *too* generalized and have to be tailored at considerable time and cost to meet specific user requirements;
b) other times the canned programs were written for specific users and have to be reprogrammed to meet the needs of the purchasing organization.

10 Q. 3 "Machine independent" refers to the use of high level computer languages such as COBOL, FORTRAN, PLI, etc. which free the programs from any particular machine (hardware configuration). The use of machine languages is a tedious task, requiring the specification of storage locations for each instruction and item of data used. Although efficient in terms of hardware performance, costs in terms of programming time, documentation difficulties and errors made managers elect to use non machine or machine independent languages. The use of higher level languages allow the programmer to write English like statements which may be readily translated to work efficiently on many different machines.

10 Q. 4 Programmed decisions are decisions that may be automated (programmed) by basing them on a decision rule which outlines the specific steps necessary to make a decision. Non programmed decisions are such that they cannot be made by a decision rule. An example of a programmed decision is the credit check made when an individual applies for a credit card. A non programmed decision is one such as the selection of an appropriate cover page for MacLean's Magazine. Here no decision rule may be stated which will provide a manager with an automatic decision on the best cover page.

From an MIS point of view the programmed decisions are much easier to define and design programs. Their ready definition and programmability allows the computerization. Non programmed decisions are much more ill defined and require more managerial study time to develop solutions which may or may not utilize computer capabilities.

(Note to Marker: Other solutions to this question may be reasonable and acceptable.)

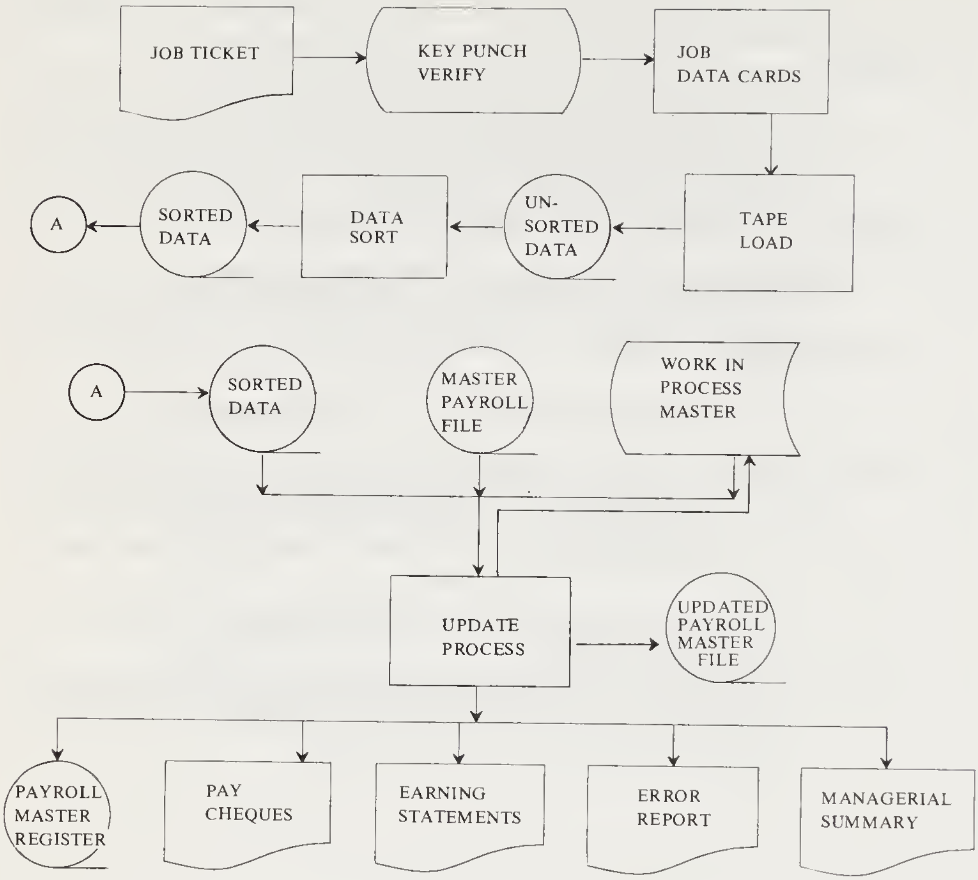
10 Q. 5 People oriented systems analysis and design stresses the people part of MIS, as contrasted to the hardware and software part of MIS. The systems analyst assures the people (user) orientation by examining the human factors in design. These include:

a) The knowledge that people will use the product of the system; thus design must take into account their needs and capabilities.

b) People will help in the process; thus the use of both humans and machines in the processing must be analyzed.

c) People are both producers and users of information. All affected individuals need to be a part of the analysis and design process. User involvement is necessary through consultation, orientation, education and training.

Q. 6


JOB TICKET
KEY PUNCH VERIFY
JOB DATA CARDS
TAPE LOAD
UN-SORTED DATA
DATA SORT
SORTED DATA
A
A
SORTED DATA
MASTER PAYROLL FILE
WORK IN PROCESS MASTER
UPDATE PROCESS
UPDATED PAYROLL MASTER FILE
PAYROLL MASTER REGISTER
PAY CHEQUES
EARNING STATEMENTS
ERROR REPORT
MANAGERIAL SUMMARY

Page 3 of 4

15 Q. 7 a)

(10)

JOB	SUCCESSOR EVENT	PREDECESSOR EVENT	t	TE
H	7	6	10	22
I		5	10	20
G		4	5	20
F	6	3	7	12
E	5	2	5	10
C	4	3	10	15
D		2	7	12
A	3	1	5	5
B	2	1	5	5

Critical path is 1 - 3 - 6 - 7

SCHEDULES:

DAY

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22
A	A	A	A	A	F	F	F	F	F	F	F	H	H	H	H	H	H	H	H	H	H
B	B	B	B	B	C	C	C	C	C	C	C	C	C	C	G	G	G	G	G		
					D	D	D	D	D	D	D										
					E	E	E	E	E	I	I	I	I	I	I	I	I	I	I		

(5) b) COST SCHEDULE ($ HUNDREDS)

16 16 16 16 16 60 60 60 60 60 60 60 65 65 65 60 60 60 60 60 30 30

10 Q. 8 (a) A file is a collection of related data records that are treated as a unit. A file is also known as a data set. The data hierarchy follows:

(4)

a) database
b) file
c) record
d) field
e) character

(b) There are many types of files, e.g., the lesson notes list seven files:

(6)

a) master
b) transaction (detail)
c) index
d) table
e) summary
f) archival (history)
g) backup

Note to marker. The student may provide examples of any four files he/she chooses. 1½ marks for each example & description. See page 3:9 of lesson notes for files and descriptions.

100

END OF SOLUTIONS

CANADIAN CERTIFIED GENERAL ACCOUNTANTS' ASSOCIATION

INCOME TAX 409 EXAMINATION

JANUARY, 1980

Marks

Time: 3 Hours

Notes:

1. This examination is based on the Income Tax Act as of December 31, 1977 as amended by Bill C-11 which received Royal Assent on December 15, 1977. It is **imperative** that, on the inside of your examination booklet, you write down the date and edition of the Income Tax Act and any subsequent amendments on which you based your study for this examination.
2. Marks will be deducted for any student's answer which mixes up different years or editions of the I.T.A. within the same question (e.g. using 1976 personal exemptions with 1977 tax rates and credits).
3. Round all calculations to the nearest dollar.

40 Q. 1. Mr. White, an accountant, has operated a professional practice in Toronto since 1974 under a sole proprietorship with fiscal periods ending on June 30.

1. The following data pertain to the 1977 fiscal year of the proprietorship: —

(a)

	Opening Balance	Closing Balance
Accounts receivable — (note 1)	$ 15,000	$30,000
Accounts payable — (note 2)	$ 7,000	$ 5,000
Work in progress — (note 3)	$ 10,000	$30,000

Note 1 — For services rendered.
Note 2 — For deductible expenses.
Note 3 — Mr. White did not and has no intention of making section 34 (1) (d) election.

(b)

Professional fees received	$100,000
Deductible expenses paid	$ 30,000

2. In 1977, he received the following investment income:

(a) Interest:

(i) Canada Savings Bonds	$ 2,000
CSB bonus (not provided for under terms at time of issue and Mr. White intends to report this interest as capital gain.)	100
	2,100
(ii) Term deposits	4,000
Total:	$ 6,100

(Mr. White reports interest on cash received basis for income tax purpose).

(b) Taxable dividends from:

(i) shares of corporations resident in Canada	Can $3,000
(ii) shares of corporations not resident in Canada (corporations are not foreign affiliates of Mr. White but Can $450 withholding tax has been deducted).	Can $2,550
	Can $5,550

PAGE 1 OF 5

3. (a) Mr. White has been separated from his wife since 1974. Mrs. White retained the house, which is owned by Mr. White, for her occupation and Mr. White makes monthly payments of $700 to his wife for living expenses during separation. No written ageement was made for this arrangement. Mr. White moved out and lived in a rented apartment.

   (b) On July 1st, 1977, Mr. White was granted a divorce when he agreed to pay Mrs. White a lump sum settlement of $120,000. He immediately sold the house for $120,000 and gave the money to his former wife. The house was purchased by Mr. White in 1967 for $40,000 (V-Day value: $70,000).

   (c) Mr. White has elected in prior years the V-Day method for computing capital gains.

4. (a) Mrs. White has realized and received the following in 1977 :—

(i) **May 1, 1977** — taxable capital gains on disposition of shares of ABC Ltd. given to her by Mr. White in 1967.	$ 750.00
May 10, 1977 — taxable capital gains on disposition of shares of K Ltd. given to her by Mr. White in 1973.	$ 800.00
(ii) **June 30, 1977** — interest from Canada Savings Bonds given to her by Mr. White in 1970.	$ 500.00
December 31, 1977 — interest from CSB given to her by Mr. White.	$ 500.00
December 31, 1977 — interest from term deposit of the $120,000 from divorce settlement.	$5,000.00
(Mrs. White has always reported her interest income on cash received basis.)	

   (b) Mrs. White has no other sources of income in 1977.

5. On December 25, 1977, Mr. White disposed of his professional practice by selling his business to one of his employees. Since all equipment used in the business was leased and there were no accounts receivable, accounts payable nor work in progress outstanding, the purchaser paid Mr. White $50,000 on December 25, 1977 for goodwill of the business. Income of his practice computed in accordance with the provisions of the Income Tax Act for the period of July 1, 1977 to December 24, 1977 was $40,000.

6. Mr. White made the following disbursements in 1977: —

(a) Canada Pension Plan contribution on self-employed earnings for 1977	$ 303
(b) 1977 federal income tax installments	$20,000
(c) Political contribution to a federal political party	$ 1,000

7. Mr. White's 1974 income tax return was reassessed in 1977 because the taxable capital gain on disposition of a piece of land was considered income. Mr. White objected to the reassessment and has engaged a lawyer to appeal his 1974 reassessment. As at December 31, 1977, the appeal has not been resolved but he has paid his lawyer $2,000 for services rendered so far.

8. An insurance consultant has provided him with information on income-averaging annuity contract (IAAC) in case he is interested. Mr. White is particularly interested in the 15 years guaranteed payout period plan which would provide a monthly payment of $245 from an IAAC if $22,000 was paid into the IAAC.

9. Mr. White has no intention of moving from Canada for at least a few years.

REQUIRED:

(12) (a) Advise Mr. White what actions he could take in 1978 in order to minimize his 1977 income for income tax purposes. Indicate also the latest dates for any action you advise him to take. (Ignore insignificant items).

(20) (b) Assuming Mr. White **did not** take your advice and **did not** take any action on his own, compute his 1977 income for income tax purposes, and

(8) (c) compute his 1977 federal income tax payable.
(1977 indexing factor under section 117.1 is 1.419)

25 Q. 2. Julia Co. Ltd. is a Canadian-controlled private corporation whose shares are owned equally by Mr. and Mrs. Julia.
The company is in the wholesale business and has fiscal years ending on December 31.
The following data, computed under the provisions of the Income Tax Act, pertain to the taxation years since incorporation: —

	1973	**1974**	**1975**	**1976**	**1977**
Income (loss) from operation	$70,000	($200,000)	($100,000)	($50,000)	$400,000
Taxable dividends from corporations resident in Canada (a)	$30,000	$30,000	$40,000	$50,000	$6,000
Taxable capital gains	$20,000	$10,000	—	$15,000	$30,000
(Allowable capital losses)	($5,000)	—	($40,000)	—	—

(a) Julia Co. Ltd. owns less than 10% of outstanding shares of each of the paying corporations.

In 1977, Julia Co. Ltd. paid $30,000 to its shareholders as dividends for the first time of which $15,000 was paid under Section 83(2) election.

REQUIRED:

(12) (a) Compute the 1977 minimum taxable income of Julia Co. Ltd.;

(10) (b) compute the minimum federal income tax payable by Julia Co. Ltd. and

(3) (c) indicate the tax consequence to Mr. & Mrs. Julia with respect to dividends paid by Julia Co. Ltd.

15 Q. 3. Watson Manufacturing Co. Ltd. was incorporated in B.C. on January 1st, 1976 and commenced immediately the business of manufacturing kitchen equipment. During 1976 the following assets were acquired: —

(a) On February 1, 1976, a 10 year old frame building was leased for a period of 10 years with a renewal option of another 10 years. The annual lease payment is $25,000 for each of the first ten years, and $45,000 for each of the next ten years. The building is being used for both manufacturing operations and office administration. Improvement costs incurred to make the building more suitable for the company's use was $10,000.

(b) On March 1, 1976, a warehouse of frame structure was completed at a cost of $150,000. This building was constructed on part of the property already leased by Watson Manufacturing Co. Ltd. (see part a)

(c) On April 1, 1976, new manufacturing equipment costing $100,000 was purchased and placed in the leased building.

(d) On January 1, 1976 a licence to manufacture a particular type of kitchen equipment for an indefinite period was purchased at a cost of $30,000 from an inventor.

(e) On February 1, 1976 new equipment and furniture costing $20,000 were purchased for use in the office.

The company's fiscal year commenced on January 1, 1976 and ended on December 31, 1976. Its 1976 operation resulted in a loss for income tax purposes and no capital cost allowance and deduction from cumulative eligible capital were claimed in that year.

In 1977 the company improved its operating performance and the federal income tax payable under Part I for its 1977 taxation year is estimated to be in excess of $50,000.

REQUIRED:

(5) (a) Compute the maximum investment tax credit that could be claimed by Watson Manufacturing Co. Ltd. in 1977.

(10) (b) Compute the maximum amount of capital cost allowance and cumulative eligible capital deduction that could be claimed by Watson Manufacturing Co. Ltd. for its 1977 taxation year.

10 Q. 4. In 1977, Mr. Rich, who uses the tax-free zone method, disposed of the following capital properties: —

Capital Property	Years of Acquisition	Cost (Can $)	V-Day Value (Can $)	Proceeds (Can $)
(a) Land	1969	20,000	30,000	35,000
Building — Class 6	1969	80,000	150,000	190,000
(This property was a rental property and the undepreciated capital cost of this class before disposition was $40,000).				
(b) Diamond rings	1965	10,000	20,000	35,000
(c) (i) Automobile (Personal use only)	1973	15,000	N/A	18,000
(ii) Automobile (Personal use only)	1974	8,000	N/A	3,000
(d) Japanese currency	1976	5,000	N/A	6,250
(The currency was purchased for use for a Japanese holiday not taken).				
(e) Land	1975	20,000	N/A	25,000
Building — Class 6	1975	70,000	N/A	50,000
(The undepreciated capital cost of this Class 6 before disposition was $55,000. This property was also a rental property).				
(f) 1,000 shares of Ace Ltd. (a Canadian public corp.)	1976	10,000	N/A	7,000
(Mrs. Rich purchased, with her own money, 1,000 shares of Ace Ltd. at $8 per share from the Toronto Stock Exchange 20 days after Mr. Rich sold his 1,000 shares of Ace Ltd.).				

REQUIRED:

Compute the amount of income that Mr. Rich must report under Subsection 3(b) of Division B of Part I of the Canadian Income Tax Act.

10 Q. 5. Mr. & Mrs. Cyr, who are long time residents of Montreal, incorporated in 1978 a limited company in Quebec to operate a small grocery store. The shares of the company were purchased, with their own money, by Mr. & Mrs. Cyr on a 50-50 basis. They chose December 31 as the year end for the company and both are working for the business. The company's 1978 income for income tax purposes was $80,000, which included deductions of bonuses paid to Mr. & Mrs. Cyr amounting to $20,000 and $15,000 respectively. On December 1, 1978, the company paid $40,000 taxable dividends to its shareholders. In addition, in 1978 Mr. Cyr has interest income of $25,000 from bank term deposits.

REQUIRED:

Compute the combined minimum federal income tax payable by Mr. & Mrs. Cyr. (The 1978 indexing factor under section 117.1 is 1.521).

END OF EXAMINATION

100

CANADIAN CERTIFIED GENERAL ACCOUNTANTS' ASSOCIATION
INCOME TAX 409 EXAMINATION
JANUARY 1980
EXAMINER'S COMMENTS

General

The examiner is happy to notice that the candidates are developing the ability to handle the practical comprehensive questions. However, there was evidence to indicate a deficiency in organizing the answers and allocating examination time.

Specific

Q.1 (a)
- Taxplanning cannot allow the change of facts. Too many candidates tried to change the divorce settlement terms which have been agreed and effected before 1978.
- Too much emphasis was placed on IAAC. (Marks were awarded for this point although not indicated in solution.)
- Designation of principal residence is required by taxpayer. Overlooked by many candidates.
- Did not know the latest dates for actions to take effect.

(b)
- Reported foreign dividend net of foreign income tax.
- Attribution of Mrs. White's income not recognized.
- Did not know the computation of professional income.

(c)
- Did not know the maximum federal tax reduction.
- Not aware of the formula for political contribution credit.
- Forgot the $20,000 income tax installment.

Q.2 (a)
- Grossed up taxable dividends received as individual.
- Did not know the format to be used to compute income and taxable income.
- Non-capital loss and net capital loss carried forward were incorrectly computed.
- Net capital loss carried forward was not restricted to taxable capital gain included in income ($30,000).

(b)
- Federal tax abatement was based on 10% of tax payable instead of taxable income.
- Did not recognize the tax refund as a result of paying taxable dividends.

(c)
- Many students did not read the 'required' for this part and indicated tax consequences to the corporation instead of Mr. & Mrs. Julia.

Q.3 (a)
- Did not know the carry forward feature of the investment tax credit.
- Rate of I.T.C., other than 5%, was awarded marks.

(b)
- Did not notice that no CCA was claimed in 1976 taxation year.
- Did not adjust capital costs of assets on which I.T.C. was claimed (Section 13(7.1)).
- Did not claim 100% of class 29 in 1977 taxation year.

Q.4
- Included capital losses for personal use property (Auto 2) and depreciable property.
- Did not reduce capital gains on foreign currency by $200.

Q.5
- Few students combined income of Mr. & Mrs. Cyr and computed tax on consolidated income.
- Missed the employment expense deduction which is not allowed.
- Did not gross-up taxable dividends correctly. Candidates wrote the exam in January, 1980 and should be aware of the change of the amount of gross-up for 1978 taxation year.

CANADIAN CERTIFIED GENERAL ACCOUNTANTS' ASSOCIATION

INCOME TAXATION 409 EXAMINATION

JANUARY, 1980

SUGGESTED SOLUTIONS

Marks **Time: 3 Hours**

40 Q. 1. (a) Advice to be given to Mr. White to minimize his 1977 income:

(3) (i) **Income from professional practice**

1. Mr. White makes section 34(1)(d) election with respect to the 1977 year-end balance of work in progress.
2. The \$30,000 W.I.P. will be excluded from his 1977 income.
3. Section 34(1)(d) election must be made no later than April 30, 1978.

(3) (ii) **Sale of his professional practice**

1. Mr. White makes section 25(1) election and continues to be resident for tax purposes for 1978, so that the income of \$40,000 for the period of July 1, 1977 to December 24, 1977 and the \$25,000 (½ of \$50,000) income computed under section 14 on the sale of goodwill will be income for the 1978 fiscal period which would be deemed to end on June 30, 1978. (Paragraph 5 of IT-313).
2. Section 25(1) election should be made in his 1977 tax return, the filing deadline is April 30, 1978.
3. Income-averaging annuity contract for the \$25,000 income computed under section 14, which is a qualified income, is not appropriate for 1977. However, it can be utilized for the 1978 taxation year.

(3) (iii) **House sold for \$120,000**

1. Designate the house as Mr. White's principal residence for the years 1972, 1973, 1974, 1975, and 1976 so that the entire capital gain of \$50,000 (\$120,000 — \$70,000) will be exempted by virtue of sections 54(g)(iii) and 40(2)(b).
2. This election must be made by April 30, 1978, the filing date for his 1977 tax return. (Regulation 2301(a)).

(3) (iv) **Contribution to Registered Retirement Savings Plan**

1. Mr. White should make premium payments into RRSP up to a maximum of \$5,500 or 20% of his earned income, whichever is less. The amount of premium will reduce his 1977 income.
2. The premium payments must be made before March 2, 1978.

(12)

	(b)				
	Section 3(a)				
	Income from professional practice:				
(5)	1977 taxation year (Schedule 1)			$107,000	
	Income from property:				
(1)	Interest — CSB	$ 2,000			
(1)	— Term deposits	4,000			
(2)	— CSB (June 30 — Mrs. White)	500	$ 6,500		
	Taxable dividends:				
(1)	Resident corporation	3,000			
(1)	Gross-up	1,000			
		4,000			
(2)	Non-resident corporation	3,000	7,000	13,500	
	Income from sale of professional practice:				
	Fiscal period (July 1 — December 25):				
(1)	Income (to December 24)		40,000		
(1)	Goodwill sold (½ x $50,000)		25,000	65,000	$185,500
	3(b) Taxable capital gains:				
(1)	CSB bonus (½ x $100)			50	
(1)	House ½ ($120,000 — $70,000)			25,000	
(1)	K Ltd. Shares given to Mrs. White in 1973			800	25,850
					211,350
(1)	3(c) CPP on self-employed earnings (Sec. 60(h))			303	
(1)	Legal expense paid for appeal of re-assessment (Sec. 60(o))			2,000	(2,303)
					209,047
	3(d) Losses from any sources				(0)
					209,047
	3(e) Excess of ACL				(0)
	Income for income tax purposes for 1977				$209,047
(20)					

	(c) Income for income tax purposes			$209,047
	Division C deductions:			
	Personal exemption:			
(½)	Self	$ 2,270		
(½)	Wife (income over 2,370)	0	$ 2,270	
(½)	Standard deduction		100	
(½)	Interest dividends and capital gains deduction		1,000	(3,370)
	Taxable income			$205,677
	Tax Calculation:			
	$205,677			
	(85,140)			$28,167
	$120,537 x 43%			51,831
(1)				79,998
(½)	Federal dividend tax credit:			
(½)	$4,000 x 18.75%			(750)
	Basic Federal Tax			79,248
	Federal tax reductions — maximum			(500)
	Federal tax			78,748
(2)	Federal foreign tax credit: lesser of			
	(a) Income tax paid to foreign country $450, and			
	(b) $3,000 x ($78,748 + 750) = $1,146			(450)
	$209,047 — 1,000			
(1)	Federal income tax payable			78,298
(1)	Less:			
	Instalment		$20,000	
	Political contribution (Schedule 2)		450	(20,450)
(8)	Net federal tax payable			$ 57,848

Schedules

(1) WIP — closing		$ 30,000	
A/R — closing		30,000	
Fees received		100,000	
		160,000	
WIP — opening	$10,000		
A/R — opening	15,000	(25,000)	$135,000
A/P — closing	5,000		
Expenses paid	30,000	35,000	
A/P — opening		(7,000)	(28,000)
			$107,000

(2) Federal political contribution			$ 1,000
75% of	$100	$ 75	
50% of	$450	225	
33-1/3% of	$450	150	
	$1,000	$450	

PAGE 3 OF 8

25 Q. 2. (a) Calculation of losses carried forward to 1977:

		1973	1974	1975	1976	1977
	Income from operation	$ 70,000				$400,000
	Taxable dividends	30,000	$ 30,000	$ 40,000	$ 50,000	6,000
		100,000	30,000	40,000	50,000	406,000
	Taxable capital gains	20,000	10,000	0	15,000	30,000
	Allowable capital losses	(5,000)	0	0	0	0
		15,000	10,000	0	15,000	30,000
	Loss from operation		(200,000)	(100,000)	(50,000)	
(3)	Income	115,000	0	0	0	436,000
	Division C deductions:					
(1)	Taxable dividends	(30,000)				(6,000)
	Losses application:					
(4)	Non-capital loss	(85,000)				(240,000)
(4)	Net capital loss	0				(30,000)
	Taxable income	$ 0	$ 0	$ 0	$ 0	$160,000
	Non-capital loss (sec. 111 (8)(b))					
	Loss from operation		$200,000	$100,000	$ 50,000	
	Taxable dividends		30,000	40,000	50,000	
			230,000	140,000	100,000	
	Income per sec. 3(c)		(40,000)	(40,000)	(65,000)	
			190,000	100,000	35,000	
	Applied		(85,000)	0	0	
			105,000	100,000	35,000	
			(105,000)	105,000		
			$ 0	205,000		
				(205,000)	205,000	
				$ 0	$240,000	
	Net capital loss (sec. 111 (8)(a))					$ 40,000
	Excess of ACL			$ 40,000		(30,000)
	Income per sec. 3(d)			0		$ 10,000
				40,000		
				(40,000)	$ 40,000	
				$ 0		

(12)

PAGE 4 OF 8

Marks		Amount
	(b) Federal income tax payable:	
	— Part I	
(1)	$160,000 x 46%	$73,600
	Small business deduction:	
(2)	$150,000 x 21%	(31,500)
	Federal tax abatement:	
(1)	$160,000 x 10%	(16,000)
		26,100
(1)	No refundable portion of Part I tax as taxable capital gains have been offset by net capital losses.	
	— Part IV:	
	1/3 (Taxable dividends received in 1977)	
(2)	1/3 x $6,000	2,000
	Total federal tax payable	28,100
	Dividend refund = lesser of	
	1/3 (taxable dividends paid) = 1/3($15,000) = $5,000	
	RDTOH = 1/3($30,000+$30,000+$40,000+$50,000+$6,000)	
(3)	= 1/3($156,000) = $52,000	(5,000)
	Federal income tax payable	$23,100
(10)		

(2) (c) Mr. & Mrs. Julia will each receive $15,000 dividends of which only $7,500 is taxable. That is, the $7,500 taxable dividends must be included in their 1977 income. And by virtue of Section 82(1)(b), the amount to be reported is ($7,500 + 1/3($7,500)) = $10,000.

(1) However each will be entitled to a dividend tax credit of $1,875 ($10,000 x 18.75%) in computing federal income tax payable.

(3)

15 Q. 3. (a) The warehouse is a qualified property for investment tax credit purposes — Sec. 127(10)(a) Regulation 4600 (1)(a)

New equipment is also a qualified property for investment tax credit purposes — Sec. 127(10)(b) Regulation 4600 (2)(c)

Investment tax credit: (Sec. 127(5))

(2)	1. Cost of warehouse	$150,000
(2)	2. Cost of new equipment	100,000
		$250,000
(1)	5% of $250,000	$ 12,500
(5)		

(b) 1977

	CLASS	UCC	ADDITION	DISPOSED	UCC	RATE	CCA
(2)	6	$150,000 (7,500)(1)	0	0	$142,500	10%	$14,250
(1)	8	20,000	0	0	20,000	20%	4,000
(2)	13	10,000(2)	0	0	10,000	(2)	500
(3)	29	100,000 (5,000)(1)	0	0	95,000	(3)	95,000
	Maximum CCA for 1977						$113,750

CEC:

	1976 Addition = 1/2($30,000)	$15,000	
	1976 Amortization	0	
		15,000	
(2)	1977 Amortization (10%)	(1,500)	$1,500
(10)			

(1) Section 13(7.1) adjustment

(2) Annual write-off = $10,000 ÷ (10+10) = $500

(3) Rate — See Regulation 1100(1)(y), no CCA taken in 1976.

PAGE 6 OF 8

10 Q. 4. Income computed under Subsection 3(b)

1. **Properties other than LPP:**

	Item	Proceed/Deemed Proceed	Adjusted Cost Base	Capital Gain (Loss)
(1)	(a) Land	$35,000	($30,000)	$ 5,000
(1)	Building — Class 6	(80,000+(190,000—150,000))	(80,000)	40,000
(1)	(c) 1973 Auto (PUP)	18,000	(15,000)	3,000
(1)	1974 Auto (PUP)	3,000	(8,000)	0
(1)	(d) Japanese Currency	6,250	(5,000)	
	(Sec. 39(2))		(200)	1,050
(1)	(e) Land	25,000	(20,000)	5,000
(1)	Building Class 6	50,000	(70,000)	0
(1)	(f) Disposition of ACE Ltd.'s shares (superficial loss (Sec. 54(i))			0
	Capital Gains			$54,050
	2. **Listed personal properties:**			
(1)	(b) Diamond rings	$35,000	($20,000)	$15,000
	Taxable capital gains — 1/2($54,050)			$27,025
	Taxable net gain — 1/2($15,000)			7,500
(1)	Income per Subsection 3 (b)			$34,525

10 Q. 5. **1978 Taxation Year**

Marks			Mr. Cyr		Mrs. Cyr	Total
	Bonus		$20,000		$15,000	
	Less employment expense deduction		(250)		(250)	
(1)			19,750		14,750	
	Taxable dividends		20,000		20,000	
	Gross-up		10,000		10,000	
(2)			30,000		30,000	
	Interest income		25,000		0	
	Income for income tax purposes		74,750		44,750	
	Division C deductions:					
(½)	Personal exemption		(2,430)		(2,430)	
(½)	Standard deduction		(100)		(100)	
(1)	Interest dividends deduction		(1,000)		0	
	Taxable income		$71,220		$42,220	
		$71,220		$42,220		
		(59,319)	$17,735	(36,504)	$ 9,521	
		$11,901x39%	4,642	$5,716x36%	2,058	
(1)			22,377		11,579	
	Dividend tax credit:					
		3/4 x $10,000	(7,500)	3/4 x 10,000	(7,500)	
(2)	Basic federal tax		14,877		4,079	
	Federal tax reduction					
(2)	9% of Basic federal tax (max. $500)		(500)		(367)	
	Federal income tax payable		$14,377		$ 3,712	$18,089
(10)						

100

END OF SOLUTIONS

PAGE 8 OF 8

CANADIAN CERTIFIED GENERAL ACCOUNTANTS' ASSOCIATION
INCOME TAX 409 EXAMINATION
MARCH, 1980

Marks

Time: 3 Hours

Notes:

1. This examination is based on the Income Tax Act as it stood on January 1, 1979. It is imperative that, on the inside cover of your examination booklet, you write down the date and edition of the Income Tax Act and any subsequent amendments on which you based your study for this examination.
2. Marks will be deducted for any student's answer which mixes up different years or editions of the I.T.A. within the same question (e.g., using 1978 personal exemptions with 1979 tax rates and credits.)
3. Round all calculations to the nearest dollar.
4. The following tables are provided for reference:

	1978	1979
Basic exemption	$2,430	$2,650
Additional marital	2,130	2,320
Total marital	$4,560	$4,970
Spouse's income limit	$ 400	$ 430
Dependants under 16 (under 17 in 1979)	460	500
Dependants under 16-income limit	1,610	1,750
Dependants 16 or over (17 or over in 1979)	840	910
Dependants 16 or over-income limit	1,690	1,840
Taxpayers over 65 or blind or bedridden	1,520	1,660

1979

Taxable income	Tax	
$ 829 or less	6%	
829	$ 50 + 16% on next	$ 829
1,658	182 + 17% on next	1,658
3,316	464 + 18% on next	1,658
4,974	763 + 19% on next	3,316
8,290	1,393 + 21% on next	3,316
11,606	2,089 + 23% on next	3,316
14,922	2,852 + 25% on next	3,316
18,238	3,681 + 28% on next	4,974
23,212	5,073 + 32% on next	16,580
39,792	10,379 + 36% on next	24,870
64,662	19,332 + 39% on next	34,818
99,480	32,911 + 43% on remainder	

15 Q. 1. In October 1979 Mr. Good transferred a highrise apartment (class 6), from which he derived income from property, to his son who was 25 years old at the time. Under the terms of the transfer, Mr. Good's son paid the $1,000,000 in 1979 for land and building at an agreed price of $300,000 and $700,000, respectively.

The following data pertain to the property transferred:

1. Year of acquisition by Mr. Good:		**1965**
2. Acquisition price:		
	Land	$ 100,000
	Building	300,000
		$ 400,000
3. Fair market value on December 31, 1971:		
	Land	$ 200,000
	Building	400,000
		$ 600,000
4. Undepreciated capital cost on January 1, 1979:		
	Building (class 6) $100,000	
	- no other assets in the class after transfer	
	- no addition in 1979 to this class after transfer	
5. Fair market value in October 1979:		
	Land	$ 450,000
	Building	1,000,000
		$1,450,000

Required:

With respect to this transfer indicate the tax implications in 1979 to:

(10) (a) Mr. Good, and
(5) (b) Mr. Good's son.
(Support your answer with computations.)

Page 2 of 6

25 Q. 2. ABC Ltd. is a Canadian-controlled private corporation operating exclusively in the Province of Saskatchewan. Its 1979 income for income tax purposes was determined to be $490,000. Analysis of this amount revealed the following components:

1) income from active business carried on in Canada	$330,000
2) taxable dividends received from taxable Canadian corporations	50,000
3) taxable capital gains on disposition of property	100,000
4) income from inactive business carried on in Canada	30,000
5) allowable capital loss on disposition of property	(20,000)
	$490,000

The company has the following losses carried forward from 1978, its first fiscal period:

Non-capital loss	$200,000
Net capital loss	90,000
	$290,000

In 1979, the company paid its first taxable dividend of $80,000 to its shareholders.

Required:

Compute the following for the 1979 taxation year of ABC Ltd.:

(8) (a) taxable income; and

(17) (b) federal income tax payable.

25 Q. 3. Mr. Wonderful is the sole owner of a Canadian-controlled private corporation. The business of the company is very profitable and Mr. Wonderful attributes its success to the devotion of some of the employees. Since 1975 he has established a program of granting options to a selected group of employees to purchase shares of the company without diluting his own shareholdings to less than 91% of the total issued shares. The employees borrowed the necessary funds from their banks whenever they exercised the options.

The following are details of the option program:

Dates on which options were granted	Number of shares granted to each employee in the group	Option price per share	Latest dates to exercise
January 1, 1975	1,000	$ 2.00	Dec. 31, 1975
January 1, 1976	2,000	3.50	Dec. 31,1976
January 1, 1977	3,000	5.00	Dec. 31, 1977
January 1, 1978	4,000	7.00	Dec. 31, 1978
January 1, 1979	5,000	10.00	Dec. 31,1979

(The option price per share for 1980 option is $12.00.)

The option price is the same as the fair market value of the shares on the date when the option was granted.

Mr. Sure and Mr. Doubt are employees of the company since 1973, and they are members of the selected group of employees. They both exercised the options on the last day of every year and were dealing at arm's length with the company at all times. The fair market values of the shares on the dates when the options were exercised (December 31) were the same as the fair market values on the dates when the next option was granted (January 1 of the following year).

Prior to 1980 Mr. Sure and Mr. Doubt have not disposed of any of the shares exercised under the option program. In April 1980 Mr.Doubt sold all of his shares to Mr. Sure for $13 per share. Mr. Doubt received in 1980 the full proceeds without incurring any selling expense.

Required:

With respect to the option transactions and the sale of shares by Mr. Doubt, indicate the tax effects on:

(15) (a) Mr. Doubt and

(10) (b) Mr. Sure.

(Support your answer with calculations.)

15 Q. 4. Mr. Howcome acquired the following real properties on January 1, 1977:

	Land	Buildings
1) Property at West 1st Avenue	$ 20,000	$ 40,000
2) Property at West 2nd Avenue	15,000	35,000
3) Property at West 3rd Avenue	100,000	300,000
4) Property at West 4th Avenue	30,000	160,000
	$165,000	$535,000

The buildings are all over 10 years old and are considered to be class 6 for income tax purposes.

It was determined that properties at West 1st Avenue and West 2nd Avenue were used to derive rental income and the annual claim of capital cost allowance would not result in a rental loss.

The property at West 3rd Avenue was used for the restaurant business owned and operated by Mr. Howcome personally since 1977. The fiscal period of the business coincides with the calendar year.

Mr. Howcome has another business of accounting services owned and operated by himself during the day. The property at West 4th Avenue was acquired for this business which also has the calendar year as its fiscal year.

Mr. Howcome has always claimed maximum capital cost allowance since 1977.

In 1979, Mr. Howcome sold the West 3rd Avenue property for $500,000 with $350,000 as proceeds for building.

Required:

Prepare a capital cost allowance schedule, in good form, indicating the maximum claims for 1977, 1978 and 1979.

20 Q. 5. In 1979, Mr. Mead is an employee of Dayton Ltd., a Canadian corporation, and the following data pertain to his employment income:

1. Gross salary

Gross salary		$30,000
Deductions:		
Income tax withheld	$9,000	
Canada pension contribution	191	
Unemployment insurance contribution	109	
Registered pension plan withholding for current service	1,500	(10,800)
Net salary		$19,200

2. In 1979, the company's registered pension plan has permitted employees to make additonal contributions to the plan for past services. Mr. Mead has always been a contributor to the plan in prior years, but he contributed in 1979 $15,000 to the plan for his past services.
3. Mr. Mead was informed by the company that he will be given a bonus based on the profit of the company's 1979 fiscal year which ended on December 31, 1979. On February 1, 1980, Mr. Mead received $6,000 from the company with respect to his 1979 employment bonus.

4. During 1979, an automobile leased by the company at a monthly cost of $250 was made available exclusively for use by Mr. Mead. He used the automobile to drive to and from work and for the company's business purpose.

The following are Mr. Mead's other income and loss for 1979:

a)	Interest received from a loan made to his brother-in-law (note 1)		$ 300
b)	Interest received from bank deposit (note 1)		$ 250
c)	Taxable dividends received from corporation resident in Canada		$ 240
d)	Gain realized from sale of gold coins:		
	Proceeds	$1,400	
	Adjusted cost base (note 2)	(1,200)	$ 200
e)	Loss realized on sale of family automobile owned by Mr. Mead:		
	Proceeds	$2,000	
	Adjusted cost base (note 2)	(3,500)	($1,500)
f)	Taxable capital gain realized on disposition of shares of a Canadian corporation:		
	Proceeds	$2,000	
	Adjusted cost base (note 2)	(1,700)	
	1/2 of	$ 300	$ 150

Notes:

1. Mr. Mead reports interest income on cash basis.
2. Adjusted cost base to Mr. Mead immediately before disposition.

In 1979, Mr. Mead was married with 3 children of ages 13, 12, and 11. Mr. and Mrs. Mead were both 45 years of age and Mrs. Mead and the children have no income in the year.

The following payments were made by Mr. Mead in 1979:

Dentist's fees not reimbursed	$2,000
Donations to registered charity	$1,000

Required:

Compute the 1979 federal income tax payable or refundable by Mr. Mead. (Ignore taxable family allowance and general averaging.)

100 **END OF EXAMINATION**

Page 6 of 6

CANADIAN CERTIFIED GENERAL ACCOUNTANTS' ASSOCIATION
INCOME TAX 409 EXAMINATION
MARCH, 1980
EXAMINER'S COMMENTS

General

Most candidates demonstrated ability to organize answers in logical and correct presentation. There was no indication of panic reaction to the examination which was not relatively easy. This self confidence is a result of better preparation by candidates.

Specific

Q.1 (a) ITAR rules for capital property (land) and capital property that is depreciable were not applied (ITAR 26(3), ITAR 20(1)). It is improper to determine capital gains on disposition of the property by grouping land and building together. Proceeds for land is determined differently from that of building.

(b) Lack of understanding of ITAR 26(5) and ITAR 20(1)(b) with respect to the acquisition costs to Mr. Good's son.

Q.2 (a) Unable to calculate the proper amount of net capital loss carried forward. (Section 111(1)(b)).

(b) Federal tax abatement was based on the tax payable instead of taxable income.
Lack of understanding of the refundable dividend tax on hand which includes refundable portion of Part I tax and Part IV tax.

Q.3 This question was poorly done although the question provided a real life tax situation and required some integrated basic knowledge on stock option (employment income), adjusted cost base, IAAC, taxable capital gain, interest expense and identical properties.

The 1977 option was *granted* before April 1, 1977 and as such, Section 7(1.1) is not applicable even though the option was exercised after March 31, 1977.

Many candidates did not address the issue of interest paid for money borrowed to purchase shares.

Almost all candidates suggested Mr. Doubt to include the 1978 and 1979 stock option benefits in 1978 and 1979 taxation years respectively. Section 7(1.2) required the inclusion as income in year of disposition, 1980.

IAAC was not considered for tax minimization and/or deferment.

Q.4 Most candidates understood the concept of separate classes for similar depreciable assets.

Some candidates still have a problem in determining the amount to be credited to the class for asset disposed of.

Q.5 Very well handled by most candidates.

Some problem in dealing with past service contribution to a registered pension plan while a contributor during the same period.

Used personal exemption amounts of other years even though 1979 figures were provided in exam.

Did not know the unqualified interest income for purpose of the interest deduction in computing taxable income.

Overlooked the $9,000 income tax withheld.

CANADIAN CERTIFIED GENERAL ACCOUNTANTS' ASSOCIATION
INCOME TAX 409 EXAMINATION
MARCH 1980
SUGGESTED SOLUTIONS

Marks **Time: 3 Hours**

Marks							Section Reference
15	Q. 1. Tax implications to:						
(1)	(a) **Mr. Good:**						
	- he is deemed to have disposed of the property and received proceeds equal to the fair market value at time of transfer and the following income items would have resulted:						69
					Land	**Building**	
(1)	Proceeds (land)				$450,000		
	ACB (land)						ITAR 26(3) & ITAR 26(5)
	Cost		$ 100,000				
	V-Day		$ 200,000				
	Proceeds		$ 450,000				
(1)	Median or V-Day				(200,000)		
	Deemed proceeds (building):						ITAR 20(1)
	Capital cost			$300,000			
	Proceeds (FMV)		$1,000,000				
(2)	V-Day		(400,000)	600,000		$900,000	
(1)	ACB (building)				______	(300,000)	
(1)	**Capital gain**				$250,000	$600,000	
	Deemed proceeds					$900,000	
	Capital cost					$300,000	
	Proceeds					$300,000	
	U.C.C.					(100,000)	
(2)	**Recapture**					$200,000	

(1) - Mr. Good is considered to have realized taxable capital gains of $125,000 and $300,000 on the disposition of the land and the building respectively. In addition, a recapture of $200,000 resulted.

- Unless income-averaging annuity contracts were purchased on these three items, Mr. Good would have to include the full amounts of taxable capital gains and recapture in 1979.

(b)

Mr. Good's son

- He is deemed to have acquired in 1979 the property at the following costs:

Marks			Section Reference
	Land (if V-day value elected; if not then cost determined when sold by son)	$ 300,000	ITAR 26(5)
	Building (deemed proceeds to Mr. Good)	900,000	ITAR 20(1)(d)
(3)		$1,200,000	

(2) - Capital cost allowance would be based on the $900,000 instead of $1,000,000.

25 Q. 2. (a)

ABC Ltd.

(1)		Income for tax purpose		$490,000	
		Deduct:			
(2)		taxable dividends	$ 50,000		
(2)		non-capital loss	200,000		
(3)		net capital loss	80,000	(330,000)	
		Taxable income		$160,000	
	(b)	**PART I Tax:**			
		Taxable income		$160,000	
		Basic:			
(1)		$160,000 × 46%		$ 73,600	
		Small business deduction:			
		$150,000 × 21%			
(2)		(CDA of 1978 is $0)		(31,500)	
		Federal tax abatement:			
(1)		$160,000 × 10%		(16,000)	
				$ 26,100	
		Refundable Portion of Part I Tax:			
		Canadian investment income		$110,000	
		Deduct:			
		Net capital loss		(80,000)	$30,000
		Taxable income:		$160,000	
		Deduct:			
		Small business deduction × 4 ($31,500 × 4)		(126,000)	$34,000
(3)		2/3 (25% of $30,000)			$ 5,000
		PART IV Tax:			
(2)		$50,000 × ¼			$12,500
		Refundable Dividends Tax on Hand:			
		RP of Part I Tax			$ 5,000
(3)		Part IV tax			12,500
					$17,500
		Dividend Refund			
		RDTOH			$17,500
		$80,000 × 1/4			$20,000
(3)		D.R. (lesser of the above two figures)			$17,500
		Federal Tax payable:			
		Part I			$26,100
		DIVIDEND REFUND			(17,500)
					$ 8,600
		Part IV tax			12,500
(2)		Net			$21,100

25 Q.3.

Mr. Wonderful

Tax effects on:

(a) **Mr. Doubt**

(i) with respect to options exercised in 1975, 1976 and 1977 Mr. Doubt would have to report as income from employment in the year indicated (Section 7(1)):

	1975	**1976**	**1977**
FMV × shares exercised	($3.50 × 1,000) $3,500	($5.00 × 2,000) $10,000	($7.00 × 3,000) $21,000
Option price × shares exercised			
$2.00 × 1,000	(2,000)		
$3.50 × 2,000		(7,000)	
$5.000 × 3,000			(15,000)
Income from employment	$1,500	$3,000	$6,000
Increase in ACB (section 53 (1) (j))	$1.50/share	$1.50/share	$2.00/share

(4) - Income-averaging annuity contracts could be purchased in each of those years for forward averaging of taxes payable. (section 61 (2) (f)).

(ii) with respect to options granted and exercised after March 31, 1977 the treatments are the same as (i), with one exception. Because shares were disposed of within two years from the date he acquired the shares, Section 7 (1.1) is not applicable. However, the following income amounts are to be reported in **1980**, the year of disposition:

	1978 Option	**1979 Option**
FMV × shares exercised	($10 × 4,000) $40,000	($12 × 5,000) $60,000
Option price × shares exercised		
$7.00 × 4,000	(28,000)	
$10.00 × 5,000		(50,000)
Income from employment for 1979 (section 7 (1.2))	$12,000	$10,000
Increase in ACB	$3.00/share	$2.00/share

(4) - IAAC could be purchased for 1980 for forward averaging taxes payable

(iii) With respect to sale of the 15,000 shares, Mr. Doubt would have to report in 1980 the following taxable capital gain:

Proceeds ($13 X 15,000)		$195,000
ACB: ($2.00 + $1.50) × 1,000 =	$ 3,500	
($3.50 + $1.50) × 2,000 =	10,000	
($5.00 + $2.00) × 3,000 =	21,000	
($7.00 + $3.00) × 4,000 =	40,000	
($10.00 + $2.00) × 5,000 =	60,000	(134,500)
Capital gain		$ 60,500
Taxable capital gain		$30,250

(4) - IAAC could also be purchased for **1980** for forward averaging taxes payable (section 61 (1) (b) (ii)).

(3) (iv) With respect to interest on funds borrowed from bank to purchase shares exercised, Mr. Doubt could deduct the interest expense from his income in those years. (Section 20 (1) (c))

(b) **Mr. Sure**

(2) (i) With respect to options exercised in 1975, 1976 and 1977, the tax effects were the same as that of Mr. Doubt under (a) (i).

(ii) With respect to options granted and exercised after March 31, 1977, Mr. Sure would not have to include in income from employment the difference between the FMV and the option price in the years when the options were exercised. (Sections 7 (1.1) and 7 (1.2))

(4) By virtue of Section 7 (1.1), section 7 (1) is not applicable if the shares exercised were not disposed of, otherwise than as a consequence of death, within two years from the date he acquired the shares.

Therefore, there were no tax effects on 1978 and 1979 taxation years with respect to the options exercised.

(iii) With respect to purchase of shares from Mr. Doubt and other shares exercised, the adjusted cost base of these shares would be determined as follows:

1,000 shares	$ 3,500
2,000 shares	10,000
3,000 shares	21,000
4,000 shares: $7 × 4,000	28,000
5,000 shares: $10 × 5,000	50,000
15,000	$112,500

ACB per share of identical property (section 47)

(4)	15,000	$112,500
	15,000	195,000
	30,000	$307,500

$\frac{\$307{,}500}{30{,}000} = \underline{\$10.25}$ or $\underline{\$10.00}$

For purposes of section 7(1.1), shares are considered to be disposed of under FIFO basis (section 7(1.3)).

(iv) Interest on funds borrowed by Mr. Sure – treatment same as (a)(iv).

15 Q. 4. **Mr. Howcome**

	(Regulation 1101(1))	Class 6(a)	Class 6(b)	Class 6(c)	TOTAL
	1977 Additions	$40,000	$300,000	$160,000	
		35,000			
(4)		75,000	300,000	160,000	
(1)	CCA 10%	(7,500)	(30,000)	(16,000)	$(53,500)
	1978 UCC	67,500	270,000	144,000	
(1)	CCA	(6,750)	(27,000)	(14,400)	$(48,150)
	1979 UCC	60,750	243,000	129,600	
(3)	Disposal	0	300,000	0	
	UCC	60,750	(57,000)	129,600	
(1)	CCA	(6,075)	0	(12,960)	$(19,035)
(3)	Recapture		$57,000		
(2)	Good Format				

Page 4 of 6

20 Q. 5.

Mr. Mead

	Income from employment:			
	Salary		$30,000	
	Deductions:			
(1/2)	Employment expense	* $ 250		
(1/2)	CPP	191		
(1/2)	UIC	109		
(1)	RPP-current service	1,500		
(1)	-past service	2,000	(4,050)	$25,950
	Automobile standby charge:			
(1)	$250 × 12 × 1/3			1,000
	Income from property:			
(1)	Interest from loan		300	
(1)	Interest from deposit		250	
	Taxable dividends	240		
(1)	Gross up	120	360	910
				27,860
(1)	Taxable capital gain		150	
	Taxable net gain:			
(1)	1/2 ($1,400 — $1,200)		100	250
	Income for tax purpose			28,110
	Personal exemption:			
(1/2)	Self		2,650	
(1/2)	Wife		2,320	
(1/2)	Children (3 × $500)		1,500	(6,470)
(2)	Interest, dividends and taxable capital gain deduction: ($250 + $360 + $150)			(760)
	Medical and charitable donation:			
(1)	$2,000 – (28,110 X 3%)		1,157	
(1)	Donation		1,000	(2,157)
	Taxable income			$18,723

* Increased to $500 by 1979 amendments which were passed December 1979.
(Answer of $500 is given full marks.)

Page 5 of 6

Federal income tax computation:

	Taxable income:	$18,723		
	$18,723			
	(18,238)		Tax	$ 3,681
(2)	$ 485 × 28%			136
				$ 3,817
	Dividend tax credit:			
(1)	$360 × 25%			(90)
				3,727
	Federal tax reduction:			
(1)	$3,727 × 9%	$ 335		
	** $50 × 3	150		(485)
	Federal tax payable			3,242
(1)	Tax withheld			(9,000)
	Federal tax refundable			$ 5,758

** Deleted by 1978 amendments. Mark was not deducted for inclusion or exclusion of this item.

100

END OF SOLUTIONS

CANADIAN CERTIFIED GENERAL ACCOUNTANTS' ASSOCIATION
INCOME TAX 409 EXAMINATION
JUNE, 1980

Marks

Time: 3 hours

Notes:

1. This examination is based on the Income Tax Act as it stood on January 1, 1979. It is imperative that, on the inside cover of your examination booklet, you write down the date and edition of the Income Tax Act and any subsequent amendments on which you based your study for this examination.

2. Marks will be deducted for any student's answer which mixes up different years or editions of the I.T.A. within the same question (e.g., using 1978 personal exemptions with 1979 tax rates and credits).

3. Round all calculations to the nearest dollar.

4. The following tables are provided for reference:

	1978	1979
Basic exemption	$2,430	$2,650
Additional marital	2,130	2,320
Total marital	$4,560	$4,970
Spouse's income limit	$ 400	$ 430
Dependants under 16 (under 17 in 1979)	460	500
Dependants under 16 — income limit	1,610	1,750
Dependants 16 or over (17 or over in 1979)	840	910
Dependants 16 or over — income limit	1,690	1,840
Taxpayers over 65 or blind or bedridden	1,520	1,660

1979

Taxable Income	Tax	
$ 829 or less	6%	
829	$ 50 + 16% on next	$ 829
1,658	182 + 17% on next	1,658
3,316	464 + 18% on next	1,658
4,974	763 + 19% on next	3,316
8,290	1,393 + 21% on next	3,316
11,606	2,089 + 23% on next	3,316
14,922	2,852 + 25% on next	3,316
18,238	3,681 + 28% on next	4,974
23,212	5,073 + 32% on next	16,580
39,792	10,379 + 36% on next	24,870
64,662	19,332 + 39% on next	34,818
99,480	32,911 + 43% on remainder	

PAGE 1 OF 6

30 Q. 1. In June 1979 Mr. Jasper, a Canadian entrepreneur, started a business of manufacturing bicycles in Winnipeg, Manitoba. The operation is being conducted by a wholly-owned company incorporated in Manitoba on May 30, 1979.

The following assets were acquired by the company on June 15, 1979:

— Land	$ 100,000
— Building (class 6)	800,000
— erected by contractor of the company	
— ¾ of floor space is being used for manufacturing	
— New manufacturing equipment (class 29)	300,000
— Used equipment (class 8)	40,000
— Used portable electrical generating equipment (class 8)	50,000
— Used office equipment (class 8)	20,000
— New office furniture (class 8)	8,000
	$1,318,000

The company has adopted its first fiscal year to have commenced on May 30, 1979 and to have ended on December 31, 1979. It was determined that the 1979 taxable income before capital cost allowance was $490,076. Its manufacturing profits were equal to the 1979 taxable income.

Required:

(a) Compute the following amounts that could be claimed by the company for its 1979 taxation year:

(8) (i) maximum capital cost allowance and

(14) (ii) maximum investment tax credit computed in accordance with the method suggested by the lesson note.

(8) (b) Compute the 1979 federal income tax payable by the company. (Assume CCA and investment tax credit determined in (1) were claimed.)

30 Q. 2. Mr. General is a taxpayer resident in Ontario and he is employed by Easy Contractors Ltd., a Canadian-controlled private corporation. The following are data pertaining to his employment:

1. Gross salary (Jan. 1, 1979-July 31, 1979)		$14,000
Deductions:		
Income tax withheld	$2,500	
Canada pension contribution	191	
Unemployment insurance contribution	109	
Registered pension plan contribution	700	
Union dues	150	3,650
Net salary		$10,350

2. On February 1, 1979, the company granted him an option to purchase 5,000 common shares (5% of the shares issued) of the company at a price of $5.00 per share exercisable until January 31, 1980. On May 1, 1979, Mr. General purchased the 5,000 shares under the option agreement. He borrowed the $25,000 from his bank at an annual interest rate of 13%. On July 31, 1979 he sold the shares back to the company at fair market value of $7.50 per share. He immediately repaid the bank loan on July 31, 1979. Mr. General is not related for income tax purposes to other shareholders of the company, and he is dealing at arm's length with the company at all times. The fair market value of the shares of the company at the following relevant dates were:

February 1, 1979	— $5.50 per share
May 1, 1979	— $6.00 per share

3. On March 1, 1979, the company made a loan of $20,000 to him for payment of a gambling debt. Under the terms of the loan, Mr. General is to make the monthly repayment of $1,000 commencing from January 1, 1980. However, the company will not charge him interest with respect to the loan.

4. On August 1, 1979, Mr. General terminated his employment with Easy Contractors Ltd. and received $75,000 from the company's registered pension plan as benefit from withdrawal from the plan. He immediately transferred $74,000 of this benefit to a registered retirement savings plan with himself as the annuitant.

On September 1, 1979, Mr. General formed a partnership with Mr. Detail to carry out contracting business. Mr. General's shares of the partnership's income for income tax purposes for the relevant periods were:

September 1, 1979 to December 31, 1979	$25,000
January 1, 1980 to February 29, 1980	$10,000

(The partnership has adopted its first fiscal period commencing from September 1, 1979 and ending on February 29, 1980.)

In addition to his employment and business income, Mr. General has received in 1979 the following investment income:

1. Taxable dividends from taxable Canadian corporations	CAN$5,000
2. Interest from Canadian Savings Bonds	900
3. Interest from deposit in an account of a bank in the state of New York (net of withholding tax of 15%)	102
	CAN$6,002

In 1979, Mr. General was married with two children. Both Mr. and Mrs. General were 40 years old and their two children were 12 and 11 years old. Mrs. General and the children have no income for the year.

Required:

Compute the 1979 federal income tax payable by Mr. General. (Ignore taxable family allowance and general averaging.)

20 Q. 3. In 1979 Mr. Straight left his employment in B.C. and established a business in Alberta by incorporating a wholly-owned Canadian-controlled private corporation. In addition to his holding of all the shares of the company, which cost him $20,000, Mr. Straight has made a loan of $50,000 to the company for operations. Unfortunately, the company was bankrupt late in 1979 due to bad business conditions. His shares and the loan to the company were cancelled for no proceeds in 1979.

The following are Mr. Straight's other income and loss for 1979 determined in accordance with the provisions of the Income Tax Act:

1)	income from employment	$30,000
2)	income from investment:	
	— interest from bank deposits	$10,000
	— taxable dividends received from corporations resident in Canada	30,000
	— taxable dividends received from corporations not resident in Canada	10,000
		$50,000
3)	taxable capital gains from disposition of property other than listed personal property	$17,000
4)	loss from rental of properties	$ 6,000

Mr. Straight has the following losses carried forward from 1978:

non capital loss	$ 70,000
net capital loss	30,000
	$100,000

Required:

Compute, in good format, the 1979 income for income tax purposes of Mr. Straight.

PAGE 4 OF 6

20 Q. 4. The following is the Statement of Income of Howard Ltd., a Canadian-controlled private corporation, for the fiscal year ended December 31, 1979.

Howard Ltd.
Statement of Income
For the Year Ended December 31, 1979

Revenue		$2,500,000
Cost of goods sold:		
Inventory-opening	$ 300,000	
Purchases	1,500,000	
	1,800,000	
Inventory-closing	(200,000)	(1,600,000)
Gross profit		900,000
Selling and administrative expenses:		
Commission	200,000	
Salary, wages and benefits	200,000	
Advertising	100,000	
Promotion	50,000	
Office	30,000	
Rental	50,000	
Depreciation	50,000	
Donations	10,000	
Bonus	40,000	
General	30,000	
Bad debts	20,000	(780,000)
Income from operation		120,000
Other income:		
Interest	15,000	
Dividends	5,000	
Gain on disposal of investment	20,000	40,000
Income before taxes		160,000
Income tax expenses		(80,000)
Net income		$ 80,000

Additional information relating to the above expense items are:

(a) A provision of $20,000 for possible decline in the valuation of certain items included in the closing inventory was deducted.

(b) $15,000 of the $100,000 advertising expense was incurred for advertisment in United States magazines. However, about 10% of its gross revenue was derived from customers in the U.S.

(c) Included in promotion expense, an item of $20,000 was determined to be contribution to a national political party and was supported by proper receipts.

(d) Rental expense included the lease cost of $5,000 of a luxurious automobile used by the president of the company for personal and business purposes.

(e) Maximum capital cost allowance that could be claimed amounted to $150,000.

PAGE 5 OF 6

(f) The $40,000 bonus expense was not allocated to any employees. However, it was understood that only senior management is entitled to this additional employment benefit. This has been the company's policy for the last four years. The following data indicate the treatment of bonus expense for those years:

	1975	1976	1977	1978
Bonus expense (accrued but unpaid)	$10,000	$15,000	$17,000	$18,000
Bonus payments:				
1975 bonus	0	$10,000	—	—
1976 bonus	0	—	$10,000	$ 5,000
1977 bonus	0	—	—	$ 5,000
Accrued bonus payable	$10,000	$15,000	$22,000	$30,000

The company has taken no action for income tax purposes with respect to this method of payments of accrued bonus.

(g) The president of the company, being the majority shareholder, arranged to have the company pay the $5,000 holiday expense incurred by his family and included as general expense of the company. The other shareholders have no objection as they felt that the president was doing a good job.

(h) The $20,000 bad debt expense represents the allowance for doubtful accounts receivable at the end of the fiseal year. It is the company policy to expense 4% of the year-end balance of the accounts receivable as bad debts. However, the amount would have been reduced by $3,000 in 1979 if the year-end accounts receivable were reviewed individually based on all available information with respect to the collectibility of the accounts.

(i) All dividends received were taxable for income tax purposes.

(j) Details on the gain on disposal of investment are as follows:

— cost of shares of unrelated company (acquired in 1965)	$10,000
— V-Day value	$ 7,000
— proceeds, net of selling of expense of $500, from disposition in 1979	$30,000

Required:

Reconcile the 1979 net income for the year to income for income tax purposes for Howard Ltd.

100 END OF EXAMINATION

CANADIAN CERTIFIED GENERAL ACCOUNTANTS' ASSOCIATION
INCOME TAX 409 EXAMINATION
JUNE, 1980
EXAMINER'S COMMENTS

General

The result indicates an upward trend of improvement of knowledge and development of professional approach to solving tax problems. There appears to have been no time pressure.

Specific

Q.1 Most candidates could not handle the tax treatment when the investment tax credit exceeds $15,000. Failure to see the inter-relationship of investment tax credit, capital cost allowance and income tax payable was evident. The students did not reduce capital cost by section 13(7.1) adjustment. Proration of C.C.A. for a taxation year less than 12 months does not apply to class 29. Many candidates did not know this important exception. Amount qualified for investment tax credit with respect to the building is $800,000. See paragraph 14 ofInterpretation Bulletin 331 for meaning of 'primarily'. Some candidates did not understand the concept of *maximum* investment tax credit (section 127(5)). They did not compute the investment tax credit available at the end of the year and considered $15,000 the maximum. Most students did not compute federal tax abatement based on taxable income. Some candidates did not know the maximum for small business deduction ($31,500).

Overall this question was not done well. However, some candidates have demonstrated the ability to approach a difficult problem.

Q.2 Employment benefits (loan and stock option) were not computed properly. Employment expense deduction were based on gross salary only instead of all employment income before section 8 deductions. Most did not add back the $18 tax withheld on interest from U.S. bank account in computing income. The interest on the bank loan was not calculated properly. The $2,500 tax withheld was widely overlooked.

Q.3 Many candidates could not distinguish the difference between income for income tax purpose and taxable income. Many did not fully understand the allowable business investment loss. Improvement of format is strongly recommended.

Q.4 Many did not use the reconciliation method (T2S(1)). Majority of candidates have problem in computing the adjustments for bad debts and unpaid bonus. Donation was treated as a deduction in computing income. Few candidates have overlooked the inventory allowance.

CANADIAN CERTIFIED GENERAL ACCOUNTANTS' ASSOCIATION
INCOME TAX 409 EXAMINATION
JUNE, 1980
SUGGESTED SOLUTIONS

Marks **Time: 3 hours**

30 Q. 1. **Mr. Jasper**

		I.T.A. Reference
Qualified properties:		
Building (class 3)	$ 800,000	127 (10) & (11.1) Reg 4600
Manufacturing equipment (class 29)	300,000	
	$1,100,000	
(5) Investment tax credit $1,100,000 × 7%*	$ 77,000	

*5% is also acceptable

Capital Cost Allowance Schedule

Class	UCC Opening	Additions	Disposal	UCC before CCA	Rate	CCA
3*	0	$ 800,000		800,000	5%	40,000
29	0	300,000		300,000	Max. 50%	150,000
8	0	40,000		118,000	20%	23,600
		50,000				
		20,000				
		8,000				
	0	$1,218,000		$1,218,000		$213,600

CCA before section 13(7.1) adjustment
$ 63,600 × 216/365 = $ 37,637
$150,000 × 1/1 = 150,000
(5) $187,637

*Class 6 is acceptable for examination purpose as it was given in question.

	INITIAL CALCULATION	FINAL CALCULATION
Taxable income before CCA	$490,076	$490,076
CCA (before adjustments)	(187,637)	
CCA (after adjustments)		(186,517)
(2) Taxable income	$302,439	$303,559

PAGE 1 OF 5

Class	UCC	Adjustment[A]	UCC before CCA	Rate	CCA
3	$ 800,000	($37,866)	$ 762,134	5%	$ 38,107
29	300,000	(2,500)	300,000	50%	150,000
8	118,000		118,000	20%	23,600
	$1,218,000	($37,866)	$1,180,134		$211,707

$ 61,707 × 216/365 = $ 36,517
$150,000 × 1/1 = 150,000
$186,517

			CLAIM*
(3)	(A) $800,000 × 7% =	$56,000	$37,866
	300,000 × 7% =	21,000	0
(5)		$77,000	$37,866

*REDUCE CAPITAL COST OF CLASSES OF LOWER CCA RATES.
CLAIM ALLOCATION SUBJECT TO PREFERENCE OF TAXPAYER.

	Part 1 tax payable:		
(1)	Basic		
	$302,439 × 46%	$139,122	
	$303,559 × 46%		$139,637
(1)	Small business deduction:		
	$150,000 × 21%	(31,500)	(31,500)
(1)	Federal tax abatement:		
	$302,439 × 10%	(302,244)	
	$303,559 × 10%		(30,356)
	Manufacturing & processing profits deduction:		
	$150,000 × 5%	(7,500)	
	$152,439 × 6%	(9,146)	
	$302,439		
(2)	$150,000 × 5%		(7,500)
	$153,559 × 6%		(9,214)
	$303,559		
		60,732	61,067
	Investment tax credit		
(4)	$15,000 + $\frac{(60,732 - \$15,000)}{2}$		
(1)		(37,866)	(37,866)
	Part 1 tax	$ 22,866	$ 23,201

Page 2 of 5

 Q. 2. **Mr. General**

	Income from employment:			
	Gross salary		$14,000	
	Deductions:			
(½)	Employment expense ($20.000 × 3%) max.	$500		
(½)	CPP	191		
(½)	UIC	109		
(1)	RPP	700		
(½)	Union dues	150	(1.650)	
			18.350	
	Employee's loan (section 80.4 & 6(9))			
(3)	($20,000 × 9% × 10/12) − $500		1,000	
	Stock option (section 7(1))			
(3)	(5,000 × ($6.00 − $5.00))		5,000	$ 20,000
	(prescribed rate of 8% is acceptable)			
	Income from property:			
(1)	Taxable dividends	$ 5,000		
	Gross up	2,500	$ 7,500	
(1)	Interest from CSB		900	
(1)	Interest from U.S. bank account		120	8,520
	Other source			
(1)	Pension benefit			75,000
				$101,870
	Taxable capital gain:*			
	Proceed ($7.50 × 5,000)	$37,500		
	ACB ($5.00 + $1.00) × 5,000	(30,000)		
(2)	½ of	7,500		3,750
				$105.620

*(Deemed dividend is the proper treatment. However, the paid-up capital figure was not given. Either treatment is acceptable.)

(1)	Contribution to RRSP			(74,000)
				$ 31,620
	Loss from property:			
(2)	Interest on bank loan ($25,000 × 13% × 92/365)			(819)
	Income for tax purpose			$ 30,801
	Personal exemption:			
(½)	Self		$ 2,650	
(½)	Wife		2,320	
(½)	Children ($500 × 2)		1,000	(5,970)
(½)	Medical standard deduction			(100)
(1)	Interest and dividend income deduction			(1,000)
(1)	Pension Income Deduction			(1,000)
	Taxable income			$ 22,731

PAGE 3 OF 5

	Federal income tax computation:			
	Taxable income	$22,731		
(1)		(18,238)	Tax	$ 3,681
		$ 4,493	at 28%	1,258
				4,939
	Dividend tax credit:			
(1)	$7,500 × 25%			(1,875)
				3,064
	Federal tax deduction:			
	$3,064 × 9%	$276		
(2)	children $50 × 2* = $100			(276)
	(*Acceptable if 50th Edition of I.T.A. used.)			2,788
	Foreign tax credit:	lesser of		
	non-business income tax paid	18		
(3)	$\frac{\$120}{(\$30{,}801 - \$1{,}000)} \times (\$2{,}788 + \$1{,}875) =$	19		18
	Federal income tax payable			$ 2,770
(1)	Tax withheld			(2,500)
	Net tax payable			$ 270

20 Q. 3.

Mr. Straight

(2)	Income from employment			$ 30,000
	Income from property:			
(1)	Interest		$10,000	
	Taxable dividends:			
	Resident corporation	$30,000		
(2)	Gross up (included in definition)	0		
(2)		30,000		
	Non-resident corporation	10,000	40,000	50,000
				80,000
(2)	Taxable capital gains			17,000
				$ 97,000
(2)	Losses:			
	Rental of properties		$ 6,000	
(3)	Allowable business investment loss:			
(3)	Shares, $20,000 × ½ = 10,000			
	Loans, $50,000 × ½ = 25,000		35,000	(41,000)
(1)	Income for income tax purposes			$ 56,000
(2)	Good format			

Note: The $2,000 net capital loss deduction would be a deduction in computing taxable income.

PAGE 4 OF 5

20 Q. 4. **Howard Ltd.**

Marks			
(1)	Net income for the year		$ 80,000
	Add:		
(2)	Inventory reserve	$20,000	
(1)	Income tax expense	80,000	
(2)	Taxable capital gain (½ × ($30,500−$10,000−$500))	10,000	
(2)	Bad debts adjustment ($20,000−$17,000)	3,000	
(3)	1977 unpaid bonus ($17,000−$5,000)	12,000	
(1)	Donations	10,000	
(1)	Depreciation	50,000	
(2)	Political contribution	20,000	205,000
			$285,000
	Deduct:		
(2)	Inventory allowance ($300,000×3%)	$ 9,000	
(1)	Gain on disposal of investment	20,000	
(1)	Capital cost allowance	150,000	(179,000)
(1)	Income for tax purposes		$106,000

Note:

— The $5,000 family holiday expense is considered to be employment benefit and therefore is deductible from business income. No adjustment is required. However, the president would have to include this amount as income from employment.

This is treated as an employment benefit because shareholders considered this payment necessary to reward the president.

— Lease cost of auto is a deductible business expense although the president would have to include a portion of that cost as automobile stand-by charge.

— Foreign advertising expense is deductible as it was incurred to derive foreign income.

100

END OF SOLUTIONS

PAGE 5 OF 5

CANADIAN CERTIFIED GENERAL ACCOUNTANTS' ASSOCIATION
ACCOUNTING 4II EXAMINATION
JANUARY, 1980

Marks

Time: 3 hours

12 Q. 1. A) L, M and N are partners, sharing profits equally, and N sells out to Q for $17,000. The
(5) partners' capitals directly at the time of sale are:

L, Capital	$30,000
M, Capital	21,000
N, Capital	11,000
	$62,000

Required:

i) Prepare a journal entry to record that event without using asset revaluation or goodwill.

ii) Justify, or explain the merits, of your answer to part i).

(7) B) L, M and N are partners, sharing profits equally and they decide to admit Q as an equal partner for $26,000, but the cash is paid to the partners, *not* to the partnership. At the date of the admission, the capital balances of the partners were:

L, Capital	$30,000
M, Capital	21,000
N, Capital	11,000
	$62,000

Required:

Prepare a journal to admit Q as a partner using the goodwill method.

10 Q. 2. O, P, Q & R have a partnership sharing profits 40%, 30%, 20%, & 10% respectively. The audited balance sheet is:

O, P, Q & R, PARTNERSHIP
BALANCE SHEET
as at January 11, 1980

Cash	$ 7,000	Liabilities	$30,000
Non-Cash Assets	67,000	Loan from P	9,000
Goodwill	10,000	Loan from Q	7,000
		O, Capital	6,000
		P, Capital	11,000
		Q, Capital	8,000
		R, Capital	13,000
	$84,000		$84,000

Inadequate records have been kept and the cost or net book value of the separate assets can *not* be determined. The assets are somewhat unique and, to realize a price, the disposal of the assets will take some time, perhaps a year. All cash *must be paid out as it is received,* as all the partners are having severe financial problems. Due to these financial difficulties, none of the partners can be counted on to contribute any cash to the partnership.

Cash received from sale of assets:

January 18,	$28,000
February 15,	1,000
March 15,	10,000

Required:

Since the cash must be paid out immediately, prepare a schedule indicating who will receive how much cash at what time.

8 Q. 3. Import Ltd. purchases goods from Mexico, whose currency is Pesos, and imports the goods into Canada:

1) Purchase #1, December 5, $3,000 Canadian, billed in Canadian dollars

2) Purchase #2, December 15, 6,000 Pesos, billed in Pesos.

Other data:

a) Exchange rates were,

December 5, $1 Canadian	=	4 Pesos
December 15, $1 Canadian	=	6 Pesos
December 31, $1 Canadian	=	9 Pesos
January 15, $1 Canadian	=	12 Pesos

b) Both purchases were unpaid at the year end (December 31) and were paid on January 15.

Required:

All relevant journal entries related to these transactions on the books of Import Ltd., per the C.I.C.A. Handbook Section 1650, for the period December 5 through January 15.

7 Q. 4. Jungle Investments Ltd. has a branch office in the country Nowhere. This branch issued 10 year Bonds Payable at 10% interest per year with no premium or discount on July 1. The bonds are worth 100,000 units of the local currency, known as Shecks. At the date of issue, the exchange rate was 10 Shecks to $1 Canadian. But at the date of the financial statements, December 31, the exchange rate was 8 Shecks to $1 Canadian. (There is an exchange adjustment account at year-end of $4,000 *Debit* balance which is unrelated to the bonds.)

Required:

Prepare the adjusting journal entries required at year-end to account for these events. State any assumptions made and show your workings.

15 Q. 5. Your client, Problem Ltd., has given you the following Income Statement:

PROBLEM LTD.
INCOME STATEMENT
for the year ended December 31, 1979

Revenue	$400,000
Cost of Sales	150,000
Gross Profit	250,000
Expenses	100,000
Net Income	150,000
Less: Income Taxes (40%)	60,000
Net Income, after taxes	$ 90,000

On reviewing their books, you have found the following:

(i) $7,000 of the expenses have been declared non-deductible by the tax department.

(ii) The tax department allows actual expenditures for warranty repairs, ($17,000 for 1979) but the company uses an estimation procedure for the financial statements ($21,000 for 1979). This is expected to reverse itself over time.

(iii) The company had an *extraordinary* item, a *loss* on the expropriation of an asset, of $20,000. (This had been included in the expenses.) The tax savings from this loss is $6,000.

(iv) Included in the revenue is the proceeds of a lawsuit, begun in 1976, of $50,000. The tax on this will be $11,000.

(v) Depreciation expense for the period is $27,000 but capital cost allowance claimed for the period is $33,000.

(vi) The opening Retained Earnings is $1,500,000 and there were no dividends.

(vii) The legal tax rate is 40%.

Required:

Prepare in good form per Section 3470 of the C.I.C.A. Handbook, omitting all footnotes:

(12) A) an Income Statement and,

(3) B) a Retained Earnings Statement.

NOTE: Show all workings.

18 Q. 6. Calgary Ltd., acquired a subsidiary, Ottawa Ltd., on July 1, 1979 by paying $200,000 for 70% of the outstanding shares. The fiscal year for both companies is December 31.

The balance sheet of Ottawa Ltd. is:

Ottawa Ltd.
Balance Sheet
as at July 1, 1979

	Book Values	**Fair Market Values**		**Book Values**	**Fair Market Values**
Current Assets	$130,000	(130,000)	Current Liabilities	$ 60,000	($60,000)
Fixed Assets			Bonds Payable	100,000	(115,000)
			Shares	100,000	—
Land	80,000	(140,000)	R.E. January 1, 1979	70,000	—
Building, net	115,000	(100,000)	Net Income	55,000	—
Equipment, net	60,000	(90,000)	(January 1 to July 1)		
	$385,000			$385,000	

The Balance sheet of Calgary Ltd. is:

Calgary Ltd.
Balance Sheet
as at July 1, 1979

		Book Values	**Fair Market Values**		**Book Values**	**Fair Market Values**
Current Assets		$150,000	(100,000)	Current Liabilities	$ 60,000	(60,000)
Fixed Assets				Bonds Payable	200,000	(170,000)
				Shares	1,000,000	—
Land	$400,000		(800,000)	Retained Earnings		
Building, net	550,000		(400,000)	as at July 1, 1979	800,000	—
Equipment, net	360,000	1,310,000	(200,000)			
Investment in Ottawa Ltd.		200,000	—			
Goodwill		400,000				
		$2,060,000			$2,060,000	

Required:

Prepare the Consolidated Balance Sheet as at July 1, 1979 for Ottawa Ltd. and Calgary Ltd., in a format comparable to that used in the question.

N.B. Workings must be shown to obtain part marks.

NOTE: A Balance Sheet in a working paper format is *not* acceptable.

Page 5 of 6

11 Q. 7. The shareholders' equities of Black Ltd. and Bart Ltd. are as follows:

December 31, 1979

	Black Ltd.		**Bart Ltd.**
Shares $10 par	$100,000	$10 par	$ 80,000
contributed surplus			
— Premium on issues			
of shares	20,000		30,000
Retained Earnings	200,000		300,000
	$320,000		$410,000

Black Ltd. issues 10,000 shares to the shareholders of Bart Ltd. The shares have a market value of $180,000 and Black Ltd. records them at market values.

Required:

(6) A. Show how the Consolidated Shareholder's Equity would appear.

(2) B. Demonstrate how part A) may have changed if Black Ltd. has recorded the shares issued at par value of $10 per share.

(3) C. Is it possible for Black Ltd. to acquire the shares of Bart Ltd. by issuing shares and for the situation to be treated as a purchase? If so, describe the circumstances. If not, explain why.

19 Q. 8. A Ltd. owns 80% of Z Ltd. and keeps its investment account on the equity basis. The following transactions occurred during 1979:

> A Ltd. sold $100,000 (cost) of thing-mes to Z Ltd. at a 40% markup. The amount was still unpaid at year-end and Z Ltd. agreed to pay $6,000 interest. At year-end 20% of the goods remained unsold. On July 1, 1979, Z Ltd. sold a piece of land (cost $60,000) for $110,000 to A Ltd. The land contained a building, which had cost $80,000 (40% depreciated at the transfer date) which was transferred for $1, due to its condition. The building was to be destroyed in January of 1980, but originally the building was planned to have 6 years left from the transfer date.

Required:

(12) A) Prepare the *eliminating* entries which would appear on the working papers leading to the preparation of Consolidated Financial Statements at December 31, 1979.

(7) B) Below or beside each eliminating entry prepared above indicate whether the *event* would have had:

No Effect
Decrease
Increase

on the *Investment Account*, i.e., consider each event and, under the equity method, would the parent company have recorded a *journal entry* on its *books* to reflect this *event*.

100

END OF EXAMINATION

CANADIAN CERTIFIED GENERAL ACCOUNTANTS' ASSOCIATION
ACCOUNTING 411 EXAMINATION
JANUARY 1980
EXAMINER'S COMMENTS

Specific

Q.1 (a) i) Some students simply did not pay attention to the reality that N had a capital account of $11,000, i.e., they debited N's capital for $17,000, which would have resulted in a $6,000 debit balance.

ii) Generally poorly done. Most students stated that their method 'avoids goodwill or asset revaluation' without explaining *why* it is desirable to avoid asset revaluation or goodwill.

(b) i) Generally very poorly done. At least one-half of the students simply did not read the question and then debited the $26,000 to cash which implys that the cash was received by the partnership. The question states, with italics for emphasis, that it was *not*. Thus the book value of the partnership remained at $62,000 creating $42,000 of goodwill.

ii) Some students ignored important details such as giving Q any capital at all.

Q.2 i) The examiner was amazed at the students' apparent inability to perform simple subtraction. Approximately 25% of the students could not subtract $7,000 from $30,000 and arrive at $23,000 or $23,000 from $28,000 and arrive at $5,000.

ii) About 10% of the students forgot the $7,000 cash on hand.

iii) Overall the students knew the material but inability to perform basic mathematics and inattention to reading the question caused significant loss of marks.

Q.3 i) Some students had carefully memorized a similar question in the assignments which dealt with the *SALE* of goods and simply read this question as a sale of goods rather than a purchase, despite the repeated use of the term *purchase*.

ii) This question was not well done because the students were not familiar with the material. About 1/3 of the students either did not see the need for a formal entry at December 31, or felt that the gain should be *un*realized.

Q.4 This question was very badly done. The students were simply not adequately aware of the basic problem or the basic techniques. About 20% could not calculate the $2,500 increased liability. About 80% of the students felt that the increased liability should be reflected as a credit to Bonds Payable rather than Exchange Adjustment. Generally the journal entries reflected a lack of coherent thought as to what was being allocated to the Income Statement and to the Balance Sheet.

Q.5 i) The examiner was astounded at the inability of the students to recognize the proper location of extraordinary items and prior period adjustments in the financial statements. This is basic material which is apparently *not* known by a significant number of students.

ii) A large majority of the students could not calculate the deferred portion of the Provision for Income Tax.

Q.6 i) This question was very well done (median mark equal to 18).The major errors were in the calculation of goodwill and bonds payable.

ii) Unlike question 2, the mathematics were generally well done.

Q.7 (a) The majority of the students did not know how to calculate the Consolidated Shareholders' Equity correctly even though this question closely resembled the notes and an assignment question.

(b) The majority of the students felt that the Consolidated Shareholders' Equity would change as a result of the difference in recording the shares.

(c) A typographical error made this question somewhat unclear but the majority of the students answered correctly. There still remains a large number of students who do not realize that an exchange of voting shares may occur and the situation can be a purchase *or* a pooling, depending upon the identifiability of an acquirer.

Q.8 (a) Generally fairly well done with eliminating entries #7 and #8 giving problems to a large number of students.

(b) Time pressures seemed to interfere or the students simply forgot part (b) in a number of instances. When attempted, the students frequently became confused or simply answered "no effect" for each entry.

CANADIAN CERTIFIED GENERAL ACCOUNTANTS' ASSOCIATION
ACCOUNTING 411 EXAMINATION
JANUARY, 1980
SUGGESTED SOLUTIONS

Marks **Time: 3 hours**

12 Q. 1.

A)

Marks		DR	CR
(1½)	i) N, Capital	11,000	
	Q, Capital		11,000

(3½) ii) This method avoids the cost of revaluing assets, the difficulties of explaining goodwill and, if the revalued assets are depreciable, the capital accounts will come to the same balance after the asset revaluation has been amortized.

B) $26,000 × 4 = $104,000; this is the implied value of the firm. But the book value is unchanged at $62,000.

$104,000
−62,000
$ 42,000 of goodwill

Marks		DR	CR
(1)	Goodwill	42,000	
	L, Capital		14,000
(2)	M, Capital		14,000
	N, Capital		14,000
(1)	L, Capital ¼ × (30,000 + 14,000) =	11,000	
(1)	M, Capital ¼ × (21,000 + 14,000) =	8,750	
(1)	N, Capital ¼ × (11,000 + 14,000) =	6,250	
(1)	Q, Capital		26,000

Page 1 of 6

10 Q. 2.

	O	P	Q	R
LOAN		9,000	7,000	
CAPITAL	6,000	11,000	8,000	13,000
	6,000	20,000	15,000	13,000
	÷ 4	÷ 3	÷ 2	÷ 1
	1,500	6,667	7,500	13,000
				5,500
	1,500	6,667	7,500	7,500
			833	833
	1,500	6,667	6,667	6,667
		5,167	5,167	5,167
	1,500	1,500	1,500	1,500

CASH DISTRIBUTION SCHEDULE

(1)	$7,000 cash on hand to creditors. Outstanding liability is $23,000.			
(1)	$28,000 (Jan. 18th)		$23,000 to external creditors	
(1)			5,000 to R	
	$1,000 (February 15)		500 to R	
(1)	833 × 1 to R	833	500 × 1/3 = 167 to R	
(1)	833 × 2 to Q	1,666	500 × 2/3 = 333 to Q	
		2,499		
	$10,000 (March 15th)			
	833 − 167 to R	666		
	1,666 − 333 to Q	1,333		
		1,999		
				NET
(2)	$10,000 − 1,999	= 8,001	8,001 × 1/6 to R = 1,334 + 666	= 2,000 to R
			8,001 × 2/6 to Q = 2,667 + 1,333	= 4,000 to Q
(1)	$ 5,167 × 1 to R	= 5,167	8,001 × 3/6 to P = 4,000	= 4,000 to P
	$ 5,167 × 2 to Q	= 10,334	$8,001	
	$ 5,167 × 3 to P	= 15,501		
		$31,002		

8 Q. 3. **December 5**

		DR	CR
(1)	Purchases (or Inventory)	3,000	
	Accounts Payable		3,000
	December 15		
(1)	Purchases (or Inventory)	1,000	
	Accounts Payable		1,000
	December 31		
(3)	Accounts Payable	333	
	Gain on Foreign Currency		333
	6000 Pesos/9P = $1 Can. = $667 Can.		
	$1,000 − 667 = $333 Gain		
	January 15		
(3)	Accounts Payable $3,000 + $667)	3,667	
	Cash		3,500
	Gain on Foreign Currency		167

$$\frac{6{,}000 \text{ Pesos}}{12P = \$1 \text{ Can.}} = \$500 \text{ Can.}, \$667 - 500 = \$167 \text{ Gain}$$

7 Q. 4.

	CANADIAN
Bonds Payable, date of issue,	$10,000*
Bonds Payable, year-end	12,500**
Loss (increased liability)	$ 2,500

*100,000 ÷ 10 Sh/$1
**100,000 ÷ 8 Sh/$1

10 year life $2,500/10 = $250 per year.

		DR	CR
(4)	Unrealized Exchange Loss	2,500	
	Exchange Adjustment		2,500
(3)	Exchange Loss Realized	250	
	Unrealized Exchange Loss		250

15 Q. 5.

PROBLEM LTD.
INCOME STATEMENT
for the year ended December 31, 1979

(12)

Revenue			$350,000
Cost of Sales			150,000
			200,000
Less:			
Expenses			80,000
Net Income, before Income Taxes			120,000
Provision for Income Tax			
Current*	$50,000		
Deferred**	800		50,800
Net Income, after Taxes			69,200
Extraordinary Item		20,000	
Tax Saving		6,000	14,000
Net Income			$ 55,200

* 150,000 + 7,000 − 17,000 + 21,000 + 20,000 − 50,000
− 33,000 + 27,000 = 125,000 TAXABLE INCOME
× .4
50,000 TAX PAYABLE

**	TAX DEDUCTION	ACCOUNTING EXP. DIFF.	
WARR.	17,000	21,000	
DEP/CCA	33,000	27,000	
	$50,000	$48,000	2,000 × .4 = 800

PROBLEM LTD.
STATEMENT OF RETAINED EARNINGS
for the year ended December 31, 1979

(3)

Opening Balance		$1,500,000
+ Net Income		55,200
+ Lawsuit	50,000	
− Taxes	11,000	39,000
Closing Balance		$1,594,200

Page 4 of 6

 Q. 6.

CALGARY LTD.
CONSOLIDATED BALANCE SHEET
as at July 1, 1979

(2) **Current Assets** $280,000
150,000 + 130,000

(2) Fixed Assets
Land $522,000
(2) $400,000 + 80,000 + \underbrace{.7\ (140,000 - 80,000)}_{42,000}$
(3)
(1)
Building, net $631,000
(1)
(2) $550,000 + 115,000 + \underbrace{.7\ (100,000 - 115,000)}_{-10,500}$

(2) Equipment, net $464,500
$360,000 + 60,000 + \underbrace{.7\ (90,000 - 60,000)}_{+21,000}$

(3) Goodwill 400,500
400,000 + 500

$2,298,000

Current Liabilities $ 120,000
60,000 + 60,000

Bonds Payable $ 310,500
200,000 + 100,000 + .7
(115, – 100,)

Minority Interest $ 67,500

Shares $1,000,000

Retained Earnings $ 800,000

$2,298,000

Purchase Price $200,000
Less: .7 (100,000 + 70,000 + 55,000)
or 157,500
Less: Revaluations
42,000 + 21,000 – 10,500 – 10,500 = 42,000
= 500 Goodwill

OR $200,000 – .7 ($130,000 + 140,000 + 100,000 + 90,000 – 60,000 – 115,000) = $500

Minority Interest
.3 (100,000 + 70,000 + 55,000)
or 67,500
(Following journal entries not required for marks)

	CR Bonds		$ 10,500
DR	Goodwill	$ 500	
DR	Equipment	21,000	
	CR Building		10,500
DR	Land	42,000	
DR	Shares	70,000	
DR	R.E.	49,000	
DR	N.I.	38,500	
	CR Investment		200,000
	CR Minority Interest		67,500
DR	Shares	30,000	
DR	R.E.	21,000	
DR	Net Income	16,500	

11 Q. 7.

(6) A. Pooling

DR	Shares	80,000	
DR	Contributed Surplus	80,000	
DR	Contributed Surplus	20,000	
	CR Investment in Bart Ltd.		$180,000
	Shares		200,000
	Premium		30,000
	Retained Earnings		500,000
			$730,000

(2) B. There would be no difference.

(3) C. Yes; the exchange ratio of shares would be such that a pooling had *not* taken place. e.g. Black Ltd. issues *1000* shares to acquire *all* of the shares of Bart Ltd.

19 Q. 8.

(1)	A) (1)	DR	Sales	140,000	
		CR	Purchases		140,000
(1)	(2)	DR	Accounts Payable	140,000	
		CR	Accounts Receivable		140,000
(1)	(3)	DR	Interest Income	6,000	
		CR	Interest Expense		6,000
(1)	(4)	DR	Accrued Int. Payable	6,000	
		CR	Accrued Int. Receivable		6,000
(2)	(5)	DR	Cost of Goods Sold	8,000	
		CR	Inventory		8,000

(.2) (140,000) = 28,000

28,000 = Cost + .4 (Cost); ∴ 28,000 ÷ 1.4 = 20,000 COST and $8,000 INTER-COMPANY PROFIT

(2)	(6)	DR	Gain	50,000	
		CR	Land		50,000
(2)	(7)	DR	Building	47,999	
		CR	Loss		47,999
(2)	(8)	DR	Depreciation Expense	4,000	
		CR	Accumulated Depreciation		4,000

$\frac{48,000}{12 \times 6} = \$667/\text{mo.} \times 6 = 4,000$

(½) B) (1) No effect
(½) (2) No effect
(1) (3) No Effect
(1) (4) No effect
(1) (5) Decrease 8,000
(1) (6) Decrease 50,000
(1) (7) Increase 47,999
(1) (8) Decrease 2,400

100

END OF SOLUTIONS

CANADIAN CERTIFIED GENERAL ACCOUNTANTS' ASSOCIATION
ACCOUNTING 4II EXAMINATION
MARCH, 1980

Marks **Time: 3 hours**

11 Q. 1. Home office had the following selected transactions during the year with its branch office:

i) Purchased a fixed asset for the branch office, cost $15,000, and shipped it to the branch on July 1. The asset will be depreciated over 5 years straight-line. The accounting will be done through the home-office books.

ii) The home office shipped to the branch:
   (a) Cash — $19,000
   (b) Inventory, at cost, $20,000
   (c) Inventory, (cost $27,000) $35,100

Required:

Prepare the journal entries for the above data on the books of the branch *and* the home office.

10 Q. 2. On January 1, 1979 G, H, I, & J agree to form a partnership agreeing to share profits 2/7, 3/7, 1/7 & 1/7, respectively. G contributes $14,000 cash. H promises to pay $20,000 over the next year. I contributes inventory which cost $6,000 a year ago but is of indeterminable value at this time and $17,000 in cash. J contributes a building which cost $16,000 (currently valued at $27,000) and has a $4,000 mortgage, which the partnership agrees to assume. The "net income" for the year is $67,000 excluding any payments to the partners. During the year, G withdrew $8,000 dollars and J withdrew $11,000. The partners had agreed that H would receive a salary of $21,000, but since the partnership was short of cash, H did not withdraw his salary. The partnership has agreed to allow H to postpone the payment of the $20,000 until next year. The partners also agreed that 10% interest should be paid on the opening capital balances.

Required:

Prepare a statement showing the balances of the partners' capital accounts at December 31, 1979. Show all workings.

Page 1 of 5

8 Q. 3. A partnership has sold all of its assets and paid out all of its cash to its creditors and the following balances remain.

Liabilities		$21,000 CR
	PROFIT-SHARING	
R, Capital	(40%)	66,000 DR
S, Capital	(20%)	20,000 CR
T, Capital	(40%)	25,000 CR

Required:

A and B are independent of each other.

(3) A) Assuming all partners are personally bankrupt, briefly explain what the creditors of the partnership may do.

B) Assume the following information regarding the personal solvency of the partners:

	ASSETS	**LIABILITIES**
R,	$ 6,000	$28,000
S,	38,000	14,000
T,	7,000	8,000

(2) i) Indicate the course of action which you expect the creditors to take given the above circumstances.

(3) ii) Explain the rights of the partners, assuming the creditors have taken the action outlined in B)i)

8 Q. 4. The following items are on the financial statements of a foreign subsidiary, which must be consolidated with the Canadian parent:

a) Cash
b) Accounts Receivable
c) Inventories, at cost
d) Property (land)
e) Goodwill
f) Accounts Payable
g) Bonds Payable
h) Capital Stock

Required:

Indicate the appropriate translation rate of exchange (Current, Historical and Other) per Section 1650 of the C.I.C.A. Handbook. (If other, explain briefly.)

9 Q. 5. Pop Ltd. had $620,000 loss for tax purposes for the year 1979. None of this could be carried back to 1978. The future tax rate will be 40%. No virtual certainty was deemed to exist.

Required:

(5) (A) Prepare journal entries for each of the following *independent* situations.

i) Assume that the Deferred Income Tax Account had a balance of $301,000, CREDIT.

ii) Assume that the Deferred Income Tax Account had a balance of $121,000, CREDIT.

ii) Assume that the Deferred Income Tax Account had a balance of $78,000, DEBIT.

(4) (B) For situation A)ii) prepare a rough draft of the required footnote disclosure which would appear on the financial statement.

Page 2 of 5

Q. 6.

WINNIPEG LTD.
BALANCE SHEET
as at December 31, 1979

Current Assets	$ 40,000	Current Liabilities	$ 22,000
Fixed Assets			
Land	40,000	Shares $10 PAR	100,000
Building Net	70,000	Retained Earnings	48,000
Goodwill	20,000		
	$170,000		$170,000

OTTAWA LTD.
BALANCE SHEET
as at December 31, 1979

Current Assets	$ 60,000	Current Liabilities	$ 30,000
Fixed Assets			
Land	50,000	Shares $10 PAR	150,000
Building net	80,000	Retained Earnings	80,000
Equipment	40,000		
Goodwill	30,000		
	$260,000		$260,000

Other data:

i) Winnipeg Ltd. was started on July 1, 1979.

ii) On December 31, 1979 Ottawa Ltd. issues 15,000 shares to the shareholders of Winnipeg Ltd. in exchange for all the outstanding shares of Winnipeg Ltd. (This transaction is not recorded in the Balance Sheet as presented.) The share issue (investment) is recorded at par value.

Required:

(11) A) Prepare the Consolidated Financial Statements at December 31, 1979.

(4) B) Indicate how the Consolidated Balance as prepared in part A would be different if 1,500 shares had been issued by Ottawa Ltd. *Be Precise;* use numbers as well as description but do not prepare a new Balance Sheet.

19 Q. 7. Qorp Ltd. has the following balance sheet at December 31, 1979:

QORP LTD.
BALANCE SHEET
as at December 31, 1979

Current Assets		$ 75,000	Current Liabilities	$ 55,000
Fixed Assets				
Land	$ 40,000		Bonds Payable, due 1997	80,000
Building, net	110,000			
Equipment, net	60,000	210,000	Shares	120,000
			R.E. January 1, 1979	140,000
Goodwill, net		50,000	Net Loss for 1979	(60,000)
		$335,000		$335,000

On January 1, 1980 Zip Ltd., whose assets are composed entirely of share investments and cash, paid $185,000 for 70% of the outstanding shares of Qorp Ltd. The current fair market values of the net assets of Qorp Ltd. on January 1, 1980 were:

Current Assets	$ 75,000	Current Liabilities	$ 55,000
Land	85,000	Bonds Payable	80,000
Building	190,000		
Equipment	20,000		

Zip Ltd. had the following Shareholders' Equity on January 1, 1980:

Shares	$ 480,000
Retained Earnings	710,000
	$1,190,000

Required:

(15) A. Assume a consolidated Balance Sheet is prepared on January 1, 1980, calculate the dollar amounts for the following items as they would appear on that consolidated Balance Sheet:

i) Goodwill
ii) Land
iii) Equipment
iv) Shares
v) Retained Earnings
vi) Minority Interest

(4) B. Explain precisely the term *Minority Interest* (as you would to a shareholder.)

20 Q. 8. A Ltd. owns 80% of the outstanding shares of B Ltd. A Ltd. also owns 70% of the shares of X Ltd. During the year, 1979, A Ltd. sold $400,000 (cost) of goods (Widgets) to B Ltd. at a 30% markup. X Ltd. sold $300,000 (cost) of goods to A Ltd. at a 25% markup.

A Ltd. sold a piece of land (cost $90,000) to B Ltd. for $30,000.

On Oct. 1, 1979 X Ltd. sold land (cost $70,000) and a building (cost $100,000) to A Ltd. for $300,000; 40% of the price was allocated to land and 60% of the price was allocated to building. The building had 5 years of expected life as at Oct. 1, 1979 and was 30% depreciated *at that* time.

The $400,000 was unpaid at year-end and B Ltd. had agreed to pay $8,000 interest on the unpaid amount.

An inventory count showed that 20% of the widgets, which B Ltd. had purchased from A Ltd., were unsold at December 31, 1979. 70% of the gadgets, which A Ltd. had purchased from X Ltd., were also unsold.

Required:

Assuming that A Ltd. uses the Cost Method of keeping its accounts,

(16) A) prepare the eliminating entries on the working papers which would be required at December 31, 1979 to prepare the Consolidated Financial Statements.

(4) B) Calculate the effect on the Minority Interest, i.e., by how much would the Income to *each* Minority Interest be changed. Keep the two subsidiaries separate.

100

END OF EXAMINATION

CANADIAN CERTIFIED GENERAL ACCOUNTANTS' ASSOCIATION
ADVANCED ACCOUNTING 411 EXAMINATION
MARCH, 1980
EXAMINER'S COMMENTS

General

The exam was performed at a better level than previous exams.

Specific

Q.1 The candidates had significant difficulty dealing with the fixed asset correctly.

Q.2 The candidates generally wanted to give partner H a rough time, that is, no capital or no salary or no interest or all three.

Q.3 The majority of candidates knew the material well but a few wanted the partnership creditors to go after the credit balances of partners S & T. But they did not realize that there was *nothing* to go after.

Q.4 Generally very well done.

Q.5 (a) Candidates either knew the material well or made wild guesses.

(b) The responses clearly demonstrated whether the area was understood or not.

Q.6 (a) Most candidates realized it was a pooling and dealt with it accordingly.

(b) A large number of candidates thought that par was equal to market value. Why should it be? One of the points of the question was that if pooling occurs,the investment may be recorded at par but if it is a purchase, then market must be used to record the investment. If not, then the goodwill and asset revaluation could not be recorded.

Q.7 (a) The majority of the candidates became confused with goodwill and minority interest.

(b) A number of very long winded answers which said very little were received.

Q.8 The majority of the candidates appeared to anticipate this question and did well on it.

CANADIAN CERTIFIED GENERAL ACCOUNTANTS' ASSOCIATION
ACCOUNTING 411 EXAMINATION
MARCH, 1980
SUGGESTED SOLUTIONS

Marks

Time: 3 hours

Marks			DR	CR
11	Q. 1.	**Home Office Books**		
		i) **July 1**		
	(2)	Fixed Asset	15,000	
		Cash		15,000
		ii) **Dec. 31**		
	(2)	Branch Office	1,500	
		Accumulated Depreciation (15,000 ÷ 5)½ = $1,500		1,500
	(1)	Branch Office	19,000	
		Cash		19,000
	(1)	Branch office	20,000	
		Inventory		20,000
	(2)	Branch Office	35,100	
		Overvaluation of Inventory		8,100
		Inventory		27,000
		Branch Office Books		
		ii) **Dec. 31**		
	(1)	Depreciation Expense	1,500	
		Home Office		1,500
	(2)	Cash	19,000	
		Inventory	55,100	
		Home Office		74,100

10 Q. 2.

		G	H	I	J
		14,000	20,000	6,000	27,000
				17,000	−4,000
		14,000	20,000	23,000	23,000
Withdrawals		8,000	—	—	11,000
		6,000	20,000	23.000	12,000
NET INCOME					
	$67,000				
	−21,000		21,000		
	46,000				
	−8,000	1,400	2,000	2,300	2,300
	$38,000	10,857	16,285	5,429	5,429
		$18,257	$59,285	$30,729	$19,729

Page 1 of 4

8 Q. 3.

(3) A) Despite R's debit balance in the capital account, he cannot contribute any assets, hence the creditors cannot collect from him or any of the other partners. Creditors can do nothing.

(2) B) i) The creditors would claim the full $21,000 from S.

(3) ii) S would then have a capital balance of $41,000 and have a $41,000 claim against R. But if R has no assets, the claim will remain unsatisfied. T will have a $25,000 claim against R which will also remain unsatisfied.

8 Q. 4.

(1)	(a) Cash	C
(1)	(b) Accounts Receivable	C
(1)	(c) Inventories, at cost	H
(1)	(d) Property (Land)	H
(1)	(e) Goodwill	H
(1)	(f) Accounts Payable	C
(1)	(g) Bonds Payable	C
(1)	(h) Capital Stock	H*

*but the intercompany shares should be converted at the Parent's value.

9 Q. 5.

(2)	(A) i) DR	Deferred Income Tax	$248,000	
	CR	Income Tax Expense		248,000
		620,000 × .4 = 248,000		
(2)	ii) DR	Deferred Income Tax	121,000	
	CR	Income Tax Expense		121,000

(1) iii) No Entry

(4) (B) 121,000 ÷ .4 = $302,500;

A tax loss of $620,000 occurred during the period and this will be carried forward to apply to future taxable income. No virtual certainty exists; thus the deferred income tax account was drawn to $0. from $121,000. This accounts for $302,500 of the loss. The balance ($317,500) has not been journalized and, if applied to future taxable income, will show as an extraordinary item, and may be applied until 1984.

15 Q. 6.

OTTAWA LTD.
CONSOLIDATED BALANCE SHEET
ast at December 31, 1979

A)

(1)	Current Assets		$100,000
	Fixed Assets		
(1)	Land	$ 90,000	
(1)	Building, net	150,000	
(1)	Equipment	40,000	280,000
(2)	Goodwill		50,000
			$430,000
(1)	Current Liabilities	$ 52,000	
(1)	Shares	300,000	
(2)	Retained Earnings	78,000	
		$430,000	

(5) B) (i) The assets & liabilities would be revalued.
(ii) There might be consolidated Goodwill.
(iii) The Consolidated Retained Earnings would be $80,000.
(iv) The consolidated shares would be $16,500 × $10 = $165,000.

19 Q. 7.

A)

(4) i) 20,500 (3)
(3) ii) 71,500 (1)
(3) iii) 32,000 (2)
(1) iv) 480,000 Parents' shares outstanding
(1) v) 710,000 Parent's retained earnings
(3) vi) 45,000 30% of book value of the net identifiable assets, i.e.
.3 (75,000 + 210,000 − 55,000 − 80,000)

Book Values	Fair Market Values	.7 (Difference)	Net
75,000	75,000	—	75,000
40,000	85,000	+ 31,500	71,500 (1)
110,000	190,000	+ 56,000	166,000
60,000	20,000	− 28,000	32,000 (2)
50,000	—	—	—
− 55,000	− 55,000		− 55,000
− 80,000	− 80,000		− 80,000
	$235,000		

$185,000 − .7 (235,000) = $20,500 (3) — Maximum goodwill on consolidated financial statements.

(4) B) In this case, 30% of the book value of the net identifiable assets of the subsidiary company. It relates the book value (minimum "pounce" value) of the shareholders outside the consolidated entity.

20 Q. 8.

Marks				Account	Debit	Credit
(1)	A)	(1)	DR	Sales	$520,000	
			CR	Purchases		520,000
(1)		(2)	DR	Sales	375,000	
			CR	Purchases		375,000
(2)		(3)	DR	Land	60,000	
			CR	Loss on Sale		60,000
(1)		(4)	DR	Gain — Land	50,000	
			CR	Land		50,000
(2)		(5)	DR	Gain	110,000	
			CR	Building		110,000
(2)		(6)	DR	Accumulated Depreciation 1833 × 3	5,500	
			CR	Depreciation Expense		5,500
				$\frac{180{,}000}{12 \times 5 \text{ yr.}} = \$3{,}000\text{/mo. depreciation}$		
				$\frac{100{,}000 - 30{,}000}{12 \times 5 \text{ yr.}} = \$1{,}167\text{/mo. depreciation}$		
(1)		(7)	DR	Accounts Payable	400,000	
			CR	Accounts Receivable		400,000
(1)		(8)	DR	Interest Income	8,000	
			CR	Interest Expense		8,000
(1)		(9)	DR	Accrued Interest Payable	8,000	
			CR	Accrued Interest Receivable		8,000
(2)		(10)	DR	Cost of Goods Sold	24,000	
			CR	Inventory (Balance Sheet)		24,000
				(.2)(400,000) = 80,000 × .3 = 24,000 PROFIT		
(2)		(11)	DR	Cost of Goods Sold	52,500	
			CR	Inventory (Balance Sheet)		52,500
				(.7)(300,000) = 210,000 × .25 = 52,500 PROFIT		

(2) B) Minority Interest in X Ltd.
.3 (Net Income − 52,500 − 50,000 − 110,000 + 1833)

(2) Minority Interest in B Ltd.
.2 (Net Income − 8,000)

100

END OF SOLUTIONS

Page 4 of 4

CANADIAN CERTIFIED GENERAL ACCOUNTANTS' ASSOCIATION
ACCOUNTING 411 EXAMINATION
JUNE, 1980

Marks

Time: 3 Hours

8 Q. 1. A, B, C, and D have a partnership sharing profits 30%, 40%, 20% and 10% respectively. Assume all partners are unable to contribute any amount to the partnership. The audited Balance Sheet is:

A, B, C and D PARTNERSHIP
BALANCE SHEET
as at January 10, 1980

Cash	$ 4,000	Liabilities	$20,000
Non-Current Assets	48,000	Loan from C	6,000
Goodwill	6,000	A, Capital	9,600
	$58,000	B, Capital	4,000
		C, Capital	12,400
		D, Capital	6,000
			$58,000

The partnership is liquidated on January 11th and the **non-cash** assets realize $26,000.

Required:

Show how the cash of the partnership would be distributed.

11 Q. 2. A) G, H and F are partners, sharing profits equally and they decide to admit Q who pays $41,000 directly to the partners (i.e. not into the partnership) for an equal partnership. The balances of the partners' capital accounts are:

G, Capital	$30,000
H, Capital	26,000
F, Capital	17,000
	$73,000

(6) **Required:**

Prepare a journal entry to record the admission of Q, using the goodwill method.

B) Assume the same data as above, except that the $41,000 cash is paid into the partnership, not directly to the partners.

(5) **Required:**

Prepare a journal entry to record the admission of Q using the bonus method.

16 Q. 3. Zoe Ltd. has the following balance sheet as at December 31, 1979:

Zoe Ltd.
Balance Sheet
as at December 31, 1979

Current Assets		$ 70,000	Current Liabilities	$ 45,000
Fixed Assets			Bonds Payable	80,000
Land	$ 30,000			
Building, net	100,000		Shares	100,000
Equipment, net	50,000	180,000	R.E. at January 1, 1979	60,000
			Net Loss for 1979	15,000
Goodwill, net		20,000		
		$270,000		$270,000

On December 31, 1979, Halifax Ltd. bought 70% of the outstanding shares of Zoe Ltd. and paid $190,000. The current fair market values of the net assets of Zoe Ltd. on December 31, 1979, are:

Current Assets	$ 70,000	Current Liabilities	$45,000
Land	180,000	Bonds Payable	70,000
Building	160,000		
Equipment	20,000		

Halifax Ltd. is an investment company which has assets composed only of cash and short-term marketable investments.

Required:

(11) A. Calculate the following items, as they would **appear** on the **Consolidated Balance Sheet** at December 31, 1979:

i) Land
ii) Goodwill
iii) Minority Interest

(5) B. Explain the item **Goodwill** which you have calculated above.

Page 2 of 5

12 Q. 4. On January 1, 1979 Regina Ltd. acquired 60% of the shares of its new subsidiary, Dakota Ltd., for $150,000. The balance sheet of Dakota Ltd. as of the date of purchase was:

Dakota Ltd.
Balance Sheet
as at January 1, 1979

	Book Values	Fair Market Values		Book Values	Fair Market Values
Current Assets	$ 60,000	$ 60,000	Current Liabilities	$ 40,000	$ 40,000
Fixed Assets			Bonds Payable	50,000	60,000
Land	45,000	80,000	Shares	100,000	-
Building	100,000	130,000	Retained Earnings		
Equipment	50,000	10,000	as at Jan. 1, 1979	65,000	-
	$255,000	$280,000		$255,000	

Other Data:

i) The building is to be depreciated over 10 years straight-line and the equipment over 5 years straight-line and the goodwill over 20 years straight-line.

ii) Regina Ltd. lent $50,000 at 10% interest to Dakota Ltd. on July 1, 1979. (The interest was unpaid at December 31, 1979).

iii) During 1979 Dakota Ltd. earned $110,000 and paid $40,000 in dividends.

Required:

Prepare the journal entries to record the above events on the **books of Regina Ltd.** for the year 1979.

Page 3 of 5

11 Q. 5. Zquorp Ltd. had the following information:

Tax Rate		Capital Cost Allowance	Depreciation Exp.
40%	1976	$80,000	$50,000
45%	1977	95,000	50,000
50%	1978	20,000	50,000
55%	1979	60,000	50,000
60%	1980	5,000	50,000

Required:

Prepare the journal entry to account for the above information **for each year,** in accordance with the CICA Handbook.

14 Q. 6. Zwork Ltd. has a branch in the remote village of Otnorot. During the month, home-office has the following transactions with the Otnorot branch:

i) sent cash, $15,000
ii) sent fixed asset, (equipment) cost $40,000, 20% depreciated (10% per year straight-line)
iii) merchandise, at cost, $47,000
iv) merchandise, (cost $35,000) at $52,500

During the same month, the Otnorot branch had the following transactions:

a) sales, $180,000, 30% on credit
b) purchased merchandise, for cash, $30,000
c) collected $24,000 of accounts receivable
d) had $21,000 in expenses
e) all of the locally purchased merchandise was sold, and 25% of the goods received from head office remained in inventory.

Required:

Prepare all the journal entries including closing entries for the **Otnorot branch.**

8 Q. 7. Notnomde Ltd. had the following shareholders' equity at January 1, 1979:

Shares, no par, 10,000 outstanding	$150,000
Retained Earnings, January 1, 1979	310,000
	$460,000

On July 1, 1979 Notnomde Ltd. issued 10,000 shares (market value $300,000) to acquire all of the outstanding shares of Gepinniw Ltd. which had the following shareholders' equity at January 1, 1979:

Shares, par $1	$ 1,000
Retained Earnings	400,000
	$401,000

During 1979 Notnomde Ltd. earned $240,000 and Gepinniw Ltd. earned a Loss of $12,000. Both companies earned these amounts evenly over the year.

Required:

Prepare the shareholders' equity section as it would appear on the Consolidated Financial Statements as at July 1, 1979.

20 Q. 8. Cebeuq Ltd. has a 70% owned subsidiary, Awatto Ltd., with whom it conducted the following transactions during 1979:

i) purchased $70,000 of merchandise from Awatto Ltd. (cost Awatto Ltd. $40,000)
ii) sold merchandise to Awatto Ltd. for $150,000 at 20% markup on cost.
iii) sold land to Awatto Ltd. (cost $80,000) for $1.
iv) purchased equipment on July 1, 1979 from Awatto Ltd., for $150,000, (cost $150,000, 30% depreciated to date of sale, 10% per year straight-line). Cebeuq Ltd. recorded no depreciation.
v) Cebeuq Ltd. purchased $100,000 face value of 10 year bonds (4 years left to redemption) for $96,000. The bonds were on books of Awatto Ltd. at par. The interest rate is 10% but was not paid during the year. (Assume the bonds were held by Cebeuq Ltd. for the entire fiscal period.)
vi) At the end of the year, Cebeuq Ltd. had 30% of the intercompany merchandise on hand and Awatto Ltd. had 10% of the intercompany merchandise on hand.
vii) Awatto Ltd. earned $340,000 during the year and paid $50,000 in dividends.

Required:

Prepare the eliminating entries which would be required on the working papers leading to Consolidated Financial Statements at the fiscal year-end.

100

END OF EXAMINATION

CANADIAN CERTIFIED GENERAL ACCOUNTANTS' ASSOCIATION
ADVANCED ACCOUNTING 411 EXAMINATION
JUNE, 1980
EXAMINER'S COMMENTS

Specific

Q.1 Students did not know material despite 3 similar questions on previous exams.

Q.2 Students did not know material despite 3 similar questions on previous exams.

Q.3 Problem of negative consolidated goodwill stopped many students. Also unable to calculate minority interest.

Q.4 Students were all over the place, lost. Equity eliminating entries, etc. Students had a lot of difficulty with a more or less unstructured question. Very poor performance.

Q.5 Students had difficulty with a question extracted from notes.

Q.6 Very straight forward and no major problems although a large number could not handle the *closing entry.*

Q.7 All or nothing question, but similar to 2 other questions on exams.

Q.8 Very similar to 2 previous exam questions but students still had difficulty with it.

CANADIAN CERTIFIED GENERAL ACCOUNTANTS' ASSOCIATION
ACCOUNTING 411 SUGGESTED SOLUTIONS
JUNE, 1980

Marks | Time: 3 Hours

8 Q. 1.

CAPITAL

	A	B	C	D
			6,000	
	9,600		12,400	
	9,600	4,000	18,400	6,000
LOSS ON DISPOSAL				
$22,000				
+ 6,000				
$28,000 ★	8,400	11,200	5,600	2,800
	1,200	(7,200)	12,800	3,200
	3/6 3,600		2/6 2,400	1/6 1,200
	(2,400)		10,400	2,000
			2/3 1,600	1/3 800
			8,800	1,200

Cash Available:

26,000 - 20,000 = $ 4,000 + 6,000 = $10,000

$ 8,800 to C
1,200 to D
$10,000 Total

★ 58,000
- 4,000
54,000
- 26,000
28,000

Page 1 of 5

			DR	CR
11 Q. 2.				
		41,000 × 4 = 164,000		
(1)	A)	Goodwill (164,000 - 73,000)	91,000	
(2)		G, Capital		30,333
		H, Capital		30,333
		F, Capital		30,334
(2)		G, Capital 1/4 (30,000 + 30,333)	15,083	
		H, Capital 1/4 (26,000 + 30,333)	14,083	
		F, Capital 1/4 (17,000 + 30,334)	11,834	
(1)		Q, Capital		41,000
(1)	B)	Cash	41,000	
(2)		G, Capital		4,166
		H, Capital		4,167
		F, Capital		4,167
(2)		Q, Capital 1/4 (73,000 + 41,000)		28,500

16 Q. 3. a)

(3) i) Land $135,000 (1) (Or may be decreased by negative goodwill to $104,500.)

(5) ii) Goodwill $0 (2)

(3) iii) Minority Interest - .3(70,000 + 180,000 - 45,000 - 80,000) = $37,500

	FMV	BV	DIFF.	x.7	CONS. VAL(1)
Land	$180,000	30,000	150,000	105,000	135,000
Blding	160,000	100,000	60,000	42,000	142,000
Eqpment	20,000	50,000	30,000	21,000	29,000
CA	70,000	70,000	—	—	70,000
CL	- 45,000	45,000	—	—	45,000
Bonds	- 70,000	80,000	10,000	7,000	73,000
	$315,000				

.7(315,000) = $220,500
190,000 Purchase price
(2) $ 30,500 Negative Goodwill

(5) b) Negative goodwill implies a bargain purchase, but the CICA Handbook will not allow Negative goodwill (Credit Balance) to appear on the financial statements. Thus the $30,500 must be written off against other non-monetary assets at management's discretion.

12 Q. 4.

(1)	DR Investment in Subsidiary	150,000	
	CR Cash		150,000
(1)	DR Cash	24,000	
	CR Investment in Sub. .6(40,000) dividends		24,000
(1)	DR Investment in Sub.	66,000	
	CR Investment Income .6 (110,000)		66,000
(2)	DR Investment Income	1,800	
	CR Investment in Sub. .6(130,000 - 100,000) ÷ 10 yrs		1,800
(2)	DR Investment in Sub.	4,800	
	CR Investment Income .6(10,000 - 50,000) ÷ 5 yrs		4,800
(2)	DR Investment Income	2,100	
	CR Investment in Sub.		2,100
(1)	DR Accounts Receivable	50,000	
	CR Cash		50,000
(1)	DR Accounts Receivable	2,500	
	CR Interest Income		2,500
(1)	DR Investment Income	2,500	
	CR Investment in Sub.		2,500

150,000 - .6(60,000 + 80,000 + 130,000 + 10,000 - 40,000 - 60,000)

150,000 - 108,000 = 42,000 - 20 years = $2,100

11 Q. 5.

	DR	CR
1976		
Income Tax Expense Deferred	$12,000	
Deferred Income Tax		$12,000

$80,000
-50,000
$30,000 × .4 = $12,000

	DR	CR
1977		
Income Tax Expense Deferred	$20,250	
Deferred Income Tax		$20,250

$95,000
-50,000
$45,000 × .45 = $20,250

	DR	CR
1978		
Deferred Income Tax	$12,900	
Income Tax Exp. Deferred		$12,900

$20,000
-50,000

$$-30,000 \times \underbrace{\frac{12,000 + 20,250}{30,000 + 45,000}}_{43\%} = \$12,900$$

1979

Income Tax Exp. Deferred	$ 5,500	
Deferred Income Tax		$ 5,500

$$\begin{array}{l} \$60{,}000 \\ \underline{-50{,}000} \\ \$10{,}000 \times .55 = \$5{,}500 \end{array}$$

1980

Deferred Income Tax	$20,332	
Income Tax Exp. Deferred		$20,332

$$\begin{array}{l} \$\ 5{,}000 \\ \underline{-50{,}000} \\ -45{,}000 \times \underbrace{\dfrac{12{,}000 + 20{,}250 - 12{,}900 + 5{,}500}{30{,}000 + 45{,}000 - 30{,}000 + 10{,}000}}_{.452} = \$20{,}332 \end{array}$$

14 Q. 6.

1)	DR	Cash	$15,000	
	CR	Home office		15,000
2)	DR	Equipment	40,000	
	CR	Accumulated depreciation		8,000
	CR	Home office		32,000
3)	DR	Depreciation Expense	333	
	CR	Accumulated depreciation $1/12 \times 10\% \times 40{,}000$		333
4)	DR	Merchandise inventory	99,500	
	CR	Home office		99,500
5)	DR	Accounts receivable	54,000	
	DR	Cash	126,000	
	CR	Sales		180,000
6)	DR	Merchandise	30,000	
	CR	Cash		30,000
7)	DR	Cash	24,000	
	CR	Accounts receivable		24,000
8)	DR	Expenses	21,000	
	CR	Cash		21,000
9)	DR	Sales	180,000	
	CR	Merchandise		104,625
	CR	Expenses		21,000
	CR	Depreciation expense		333
	CR	Branch income		54,042

$30{,}000 + .75(99{,}500) = 104{,}625$

10)	DR	Branch income	54,042	
	CR	Home office		54,042

8	Q. 7.	Shares 150,000 + 150,000	$300,000	**Retained Earnings**
		Retained Earnings	675,000	$310,000
			$975,000	+400,000
				$710,000
				-149,000*
				$561,000
				+120,000
				- 6,000
				$675,000

		DR Shares	1,000	
		DR Contributed Surplus	150,000	
	(1)	DR Retained Earnings	149,000*	
		CR Invest. in Gepinniw		300,000
20	Q. 8.	DR Sales	220,000	
		CR Cost of Goods sold		220,000
		$70,000 + 150,000 = $220,000		
		DR Land	79,999	
		CR Loss		79,999
		DR Gain	45,000	
		CR Accumulated Depreciation		45,000
		DR Depreciation Expense	7,500	
		CR Accumulated Depreciation		7,500
		10% × 150,000 × 1/2 = 7,500		
		DR Bonds Payable	100,000	
		CR Bond Investment		97,000
		CR Gain - Inter-company		3,000
		DR Interest Income	11,000	
		CR Interest Expense		10,000
		CR Gain-Inter-company		1,000
		DR Cost of Goods Sold	12,000	
		CR Inventory		12,000
		70,000 × 30% = 21,000 ÷ 1.75 = 12,000		
		DR Cost of Goods Sold	12,500	
		CR Inventory		12,500
		(150,000 × .1) = 15,000 ÷ 1.2 = 12,500		
		DR Investment in Subsidiary ★	35,000	
		CR Dividends		35,000
		DR Subsidiary Net Income	340,000	
		CR Minority Interest ★		102,000
		CR Investment in Subsidiary		238,000
		★ Assume Equity Basis		
		DR Minority Interest	15,000	
		CR Dividends		15,000

100

END OF SOLUTIONS

CANADIAN CERTIFIED GENERAL ACCOUNTANTS' ASSOCIATION
AUDITING 417 EXAMINATION
· JANUARY, 1980 ·

Marks **Time: 3 hours**

12 Q. 1. (a) In order to judge the external auditor's independence in appearance, one has to carefully evaluate the circumstantial evidence or relationship between the external auditor and his client.

Required:

(6) (i) Identify *three types* of circumstantial evidence or relationships which may affect the external auditor's independence in appearance.

(2) (ii) Briefly explain why circumstantial evidence or relationship may affect the auditor's independence in appearance.

(4) (b) Why should the external auditor's independence and competence be essential to the attest or audit function? Briefly explain.

8 Q. 2.

(4) (a) Explain briefly the primary purpose of internal auditing.

(4) (b) Explain why the external auditor is interested in the audit results of the internal auditors?

15 Q. 3. Robert Smith, CGA, has been with a large CGA firm for the past three years. His responsibilities have been restricted primarily to working on retail store audits and their related tax problems. He has also spent several months in his firm's tax departments. Due to the resignation of several staff members in the past year and the addition of new clients, the firm is badly understaffed.

Robert is sent out on the audit of a construction company, which is publicly held and has always received an unqualified opinion. He is given relatively little guidance by the partner responsible for the audit because the latter's recent illness has forced him to devote less time to his professional responsibilities. Robert is conscientious in his responsibilities, but he feels uncomfortable and uneasy throughout the audit because of the technical difficulties he encounters. To add to his problems, he is pressured by the client's controller to meet the deadline the partner had agreed to, even though the audit did not start until a week later than scheduled. By working long days and weekends, Robert is able to complete the job in time to meet the deadline. He feels the audit is far from perfect, but considering the circumstances, he is fairly well satisfied with the quality of performance.

Required:

(10) (a) Identify and explain the general and examination (fieldwork) standards of the generally accepted auditing standards which may have been violated in this audit engagement.

(5) (b) Explain how the accounting firm could have avoided this situation.

17 Q. 4.

(9) (a) State the objective or objectives of each of the following audit procedures:

(i) Trace transactions recorded in the purchases journal to supporting documentation, comparing the vendor's name, total dollar amounts, and authorization for purchase.
(ii) Account for a sequence of receiving reports and trace selected ones to related vendor's invoices and purchases journal entries.
(iii) Prepare a proof of cash disbursements for an interim month.

(8) (b) Assuming the amounts involved are material, list *two* audit procedures that would *most likely* lead to the discovery of *each* of the following situations:

(i) The failure to disclose a lawsuit where the amount of liability is unknown.
(ii) The inclusion of invalid amounts in accounts receivable by preparing fictitious sales invoices to customers.

Marks

21 Q. 5. For the past few years, you have been the auditor of X Co. Ltd., whose year end is December 31. The company's system of internal control for accounts receivable is very satisfactory. An interim (compliance) audit, which included confirmation of the accounts receivable, was performed at September 30. The results of the interim audit indicated that the accounting for cash, sales, sales returns and allowances, and receivables was very reliable.

The company's sales are principally to manufacturing concerns. There are about 1,500 active trade accounts receivable for which 35 percent represent 70 percent of the total dollar amount. The accounts receivable are maintained alphabetically in five subledgers which are controlled by one general ledger account.

Sales are machine-posted in the subledgers by an operation that produces simultaneously the customer's ledger card, his monthly statement, and the sales journal. All cash receipts are in the form of customers' cheques and are machine-posted simultaneously on the customer's ledger card, his monthly statement, and the cash receipts journal. Information for posting cash receipts is obtained from the remittance advice portions of the customers' cheques. The bookkeeping machine operator compares the remittance advices with the list of cheques that was prepared by another person when the mail was received.

Summary totals are produced monthly by the bookkeeping machine operations for posting to the appropriate general ledger accounts such as cash, sales, and accounts receivable. Aged trial balances of accounts receivable are prepared monthly.

Required:
List *seven* additional audit procedures necessary for testing the December 31 balances of accounts receivable and sales. (Ignore audit procedures for financial statement presentation, bad debts, and allowance for uncollectible accounts.)

12 Q. 6. Identify the four most important elements or assertions in the opinion paragraph of the *standard* audit report *and* explain the significance or rationale underlying each of the elements.

15 Q. 7. Select the *best* answer for each of the following items. Answer each of these items in your examination booklet by giving the letter of your choice. For example, if 'a' is the best answer for item 1, write 1'a' in your booklet. Select only *one* answer for each item. If more than one answer is given, that item will *not* be marked. Wrong answers will be graded as zero and *no* further marks will be deducted. *No* account will be taken of any explanations you offer.

1. A well-designed system of internal control that is functioning effectively is most likely to detect an irregularity arising from:
   (a) Management fraud.
   (b) The fraudulent action of an individual employee.
   (c) The fraudulent action of several employees.
   (d) Informal deviation from the official organization chart.
   (e) The fraudulent action of the controller who supervises all accounting functions.
2. When evaluating internal control, the external auditor's primary concern is to determine
   (a) The possibility of fraud occurring.
   (b) The reliability of the accounting information system.
   (c) Compliance with client's established policies, plans, and procedures.
   (d) The type of an opinion he will issue.
3. With respect to proceedings of the meetings of the board of directors of a client corporation, the normal auditing procedure is to
   (a) Obtain from the secretary of the client corporation a minutes representation letter that summarizes actions pertinent to the financial statements.
   (b) Discuss proceedings of the board with its chairman or his designated representative.
   (c) Review the minutes of all meetings of the board of directors.
   (d) Obtain tapes or written transcripts of all meetings or attend all meetings.

Marks

4. Which of the following is the *most* important internal control procedure over acquisitions of property, plant, and equipment?
   (a) Establishing a written company policy distinguishing between capital and revenue expenditures.
   (b) Analyzing monthly variances between authorized expenditures and actual costs.
   (c) Using a budget to forecast and control acquisitions and retirements.
   (d) Requiring acquisitions to be made by user departments.

5. Which of the following policies is an internal accounting control weakness related to the acquisition of factory equipment?
   (a) Advanced executive approvals are required for equipment acquisitions.
   (b) Depreciation policies are reviewed only once a year.
   (c) Acquisitions are to be made through and approved by the department in need of the equipment.
   (d) Variances between authorized equipment expenditures and actual costs are to be immediately reported to management.

6. Engagement letters are widely used in practice for professional engagements of all types. The primary purpose of the engagement letter is to:
   (a) Remind management that the primary responsibility for the financial statements rests with management.
   (b) Provide a starting point for the auditor's preparation of the preliminary audit program.
   (c) Provide a written record of the agreement with the client as to the services to be provided.
   (d) Satisfy the requirements of the CGA's liability insurance policy.

7. Which of the following documentary evidence is considered by the auditor as the most reliable
   (a) Vendor's invoice.
   (b) Client's duplicate sales invoice.
   (c) Client's receiving report.
   (d) Representations letter of a client.

8. During an audit engagement pertinent data are compiled and included in the audit working papers. The working papers primarily are considered to be
   (a) A client-owned record of conclusions reached by the auditors who performed the engagement.
   (b) Support for the auditor's representations as to compliance with generally accepted auditing standards.
   (c) Evidence supporting financial statements.
   (d) A record to be used as a basis for the following year's engagement.

9. It would be appropriate for the payroll accounting department to be responsible for which of the following functions?
   (a) Approval of employee time records.
   (b) Distribution of paycheques to employees.
   (c) Preparation of periodic governmental reports as to employees' earnings and withholding taxes.
   (d) Maintenance of records of employment, discharges, and pay increases.

10. An audit program for the examination of the retained earnings account should include a step that requires verification of the
   (a) Gain or loss resulting from disposition of treasury shares.
   (b) Approval of the adjustment to the beginning balance as a result of a write-down of an accounts receivable.
   (c) Market value used to charge retained earnings to account for a two-for-one stock split.
   (d) Authorization for both cash and stock dividends.

100

END OF EXAMINATION

CANADIAN CERTIFIED GENERAL ACCOUNTANTS' ASSOCIATION
AUDITING 417 EXAMINATION
JANUARY 1980
EXAMINER'S COMMENTS

General

The candidates as a whole performed very poorly in this examination, primarily due to their lack of knowledge in a number of key areas such as auditor's independence, audit reports, and audit procedures. The majority of candidates seemed to be very inadequately prepared; their answers did not address many of the major issues and they were extremely brief. Moreover, where a question required an explanation, there was either little or no explanation offered by the candidates.

Specific

Q.1 The majority of candidates performed poorly in part (a) and only satisfactorily in part (b) of this question. As a result, the overall performance on this question was poor. Most candidates answered part (a) (i) with examples rather than the types as required by the question. A great number of answers to part (a) (ii) were related to independence in fact rather than independence in appearance.

Q.2 The majority of candidates performed well in this question. Those who performed poorly did not have a firm understanding of the nature of internal auditing and its relationship to external auditing. They seemed to concentrate solely on internal accounting control in part (a) and they failed to properly relate the internal auditor's work on the internal control system to the external auditor's study and evaluation of, and subsequent reliance on the same system.

Q.3 The candidates who performed satisfactorily in this question did so because they did well in part (b). The majority of candidates did very poorly in part (a); they either failed to properly identify the standards violated, or failed to provide the appropriate supporting explanation, or both. Many candidates did not even provide any explanation whatsoever.

Q.4 Items (i) and (ii) of part (a) of this question were well done by the candidates; however, item (iii) was poorly done by a majority of the candidates. Apparently, a 'proof of cash disbursements' was poorly understood by most candidates. Part (b) of this question was answered satisfactorily. However, in many cases, although the question specifically stated *two* audit procedures, candidates listed three or more audit procedures. Unfortunately, only the first two were marked and these were not the ones *most likely* to lead to the discovery of the situation.

Q.5 This question was extremely poorly done. There are a number of reasons, some of the most important ones being:

(1) A majority of the candidates listed audit procedures considered necessary for testing the internal control system for the *entire year*, even though the question clearly stated that interim (compliance) audit procedures had been conducted at September 30 with satisfactory results.

(2) Many students were very weak in audit procedures and their appropriate application to this specific situation.

(3) Although *seven* procedures were required, in a number of cases, many more than seven were listed. However, only the first seven were marked.

Q.6 This question was not well done. Most students were unable to explain the significance or rationale underlying each of the four most important elements or assertions in the opinion paragraph of the standard audit report, even though the majority of the candidates identified these elements correctly.

Q.7 This question was well answered by the majority of candidates. Those who did poorly apparently did not read the question carefully or did not possess adequate knowledge to answer the question.

CANADIAN CERTIFIED GENERAL ACCOUNTANTS' ASSOCIATION
AUDITING 417 EXAMINATION
SUGGESTED SOLUTIONS
JANUARY, 1980

Marks **Time: 3 hours**

12 Q. 1.

(6) (a) (i) The following are types of circumstantial evidence or relationships which may affect the external auditor's independence in appearance (three required, 2 marks each for 6 marks):

1. Financial interests in a client, such as equity or debt investment, by the external auditor or his immediate family.
2. Holding office or employment in the client corporation or its affiliates by the external auditor or his immediate family as director, officer, or employee.
3. Providing incompatible professional services to his audit client such as serving as receiver, receiver-manager, liquidator, trustee, or management advisor.
4. Commercial transactions between the auditor or his immediate family with his client under terms and conditions that differ from the clients normal practices.

(2) (ii) The reason that circumstantial evidence or relationship may affect the auditor's independence in appearance is because it creates an apparent conflict of interest which may be perceived by third parties as lacking independence.

(4) (b) The external auditor's independence and competence should be essential to the attest or audit function because they ensure the credibility and reliability of his opinion on the fairness of the client's financial statements.

8 Q. 2.

(4) (a) The primary purpose of internal auditing lies in its contribution to the effective and efficient functioning of the organization to meet its established objectives.

(4) (b) The external auditor is interested in the audit results of the internal auditors because some of these audit results are related to the study and evaluation of internal accounting controls which not only affect the external auditor's assessment of the internal control system but also his determination of the nature, extent, and timing of the audit procedures.

15 Q. 3.

(10) (a) Both of the following standards may have been violated:

(i) General standard (6 marks) —

The first two elements of the general standard may have been violated, namely, having no adequate technical training and proficiency as an auditor in the construction industry and without exercising due care. Smith's experience thus far has been related to the audit of retail store operations which are quite different from the construction operations. In addition, because of the time constraints imposed and the lack of consultation with and advice from the partner responsible for the audit, Smith has not been able to acquire sufficient knowledge and expertise necessary to perform an audit of this kind, as evidenced by the technical difficulties he encountered, without which, he could hardly be expected to be able to exercise due care in the circumstances.

(ii) Examination (field work) standard (4 marks) —

The first field work standard may have been violated, namely, the work was not adequately planned, not properly executed, and not properly supervised. This was due primarily to the absence of the partner or other supervisory personnel during the engagement. The lack of sufficient knowledge and expertise of the construction operations also contributed to the inadequate planning and improper execution of the audit.

Similarly, due to Smith's lack of experience and expertise in the audit of a construction company and lack of proper supervision by the audit partner, there is doubt that he had performed an adequate and appropriate study of the internal control system and obtained sufficient appropriate audit evidence. Consequently, these two examination (field work) standards may have been violated.

Marks

(b) The accounting firm could have avoided this situation by providing:
  (i) adequate construction industry training to Smith prior to the beginning of the engagement;
  (ii) adequate supervision by an experienced auditor familiar with the construction industry;
  (iii) an alternative partner who could explain the staffing situation and the recent illness of his partner to the client's controller and obtain relief from the unrealistic time constraints.
  (iv) through adequate staffing by growing with the increase in clients and replacement of resigning members with qualified personnel.

If the firm's staffing situation were so severe and the client's time deadlines were so inflexible that none of the above alternatives were feasible, the firm should have resigned from the engagement. (any two of the above for a maximum of 5 marks)

17 Q. 4.

(9) (a) Objective or objectives of audit procedures (3 marks for each item)
  (i) To determine the validity, accuracy, and authorization of the transactions recorded in the purchases journal.
  (ii) To determine that all receiving reports are accounted for and recorded correctly in the purchases journal.
  (iii) To determine that cash disbursements and bank reconciliation for the test month are being properly handled, and that the prescribed internal controls (such as cheques are signed by the authorized officer) are being effectively carried out in actual practice.

(8) (b) Audit procedures (4 marks for each item):
  (i) Audit procedures that would most likely lead to the discovery of an undisclosed lawsuit (two procedures required — 2 marks each for any two procedures)
    1. Examination of correspondence and statements from the client's attorney.
    2. Examination of minutes of meeting of board of directors.
    3. Confirmation of contingent liabilities with the client's attorney.
    4. Representations letter from client regarding contingent liabilities.
    5. Enquiries and discussions with client's officials regarding contingent liabilities.
  (ii) Audit procedures that would most likely lead to the discovery of fictitious accounts receivables (two procedures required) (2 marks each for any two procedures)
    1. Confirmation of accounts receivable, preferably on a positive basis.
    2. Examination of supporting documents such as bill of lading and shipping report together with the examination of posting to inventory records.
    3. Examination of past due accounts.
    4. Examination of bad debt write-offs.

21 Q. 5. Additional audit procedures necessary for testing the balances of accounts receivable and sales of X Co. Ltd. (seven procedures required):
  1. Obtain reconciliations of or reconcile the sales and accounts receivable accounts from September 30 to December 31.
  2. Trace reconciling items in 1 above to supporting journals.
  3. Obtain explanation and verify the explanation for any unusual items or transactions as a result of the above two audit procedures.
  4. Examine the trial balance of accounts receivable at December 31 to ensure its correctness and accuracy. Agree with subsidiary and general ledger accounts.
  5. Consider confirmation of any accounts which have large balances at December 31 and were not included in the confirmation at September 30.
  6. Test the accuracy of the year end cut-off procedures of sales and accounts receivable.
  7. Compare sales and accounts receivable balances at December 31 to the balances at September 30.
  8. Obtain explanation for any significant differences and verify its validity.
  9.. Compute the gross margin percent on a monthly basis for the year and determine if the ratio for the months after confirmation are significantly different than before.
  10. Compute the ratio of sales returns and allowances to sales on a monthly basis and perform the same procedure as in 9 above.
  11. Obtain a representations letter from the client regarding the accounts receivable and sales balances to year end.

  (3 marks each for any seven procedures)

Marks

12 Q. 6. The four most important elements in the opinion paragraph of the standard audit report and their significance are:

Elements (1 mark each for any four)	Significance (2 marks each for any four)
1. An opinion.	This is a professional and informed opinion based on an examination in accordance with generally accepted auditing standards. The nature of the financial statements and the audit warrants only an opinion rather than a statement of fact.
2. Fair presentation of financial statements.	This implies that the financial statements are prepared in accordance with generally accepted accounting principles and thus are informative and not misleading.
3. In accordance with generally accepted accounting principles.	This provides a common basis of comparison among companies since their statements are prepared in accordance with a set of known principles generally recognized by the accounting profession.
4. Consistency with the preceding year.	This ensures a meaningful comparison of a company's performance between two periods.
5. Disclosure is adequate.	This implicit assertion reinforces the fair presentation and conformity with generally accepted accounting principles to ensure that the financial statements are informative.

15 Q. 7. 1. b
2. b
3. c
4. c
5. c
6. c
7. a
8. b
9. c
10. d
(1½ marks each)

100

END OF SOLUTIONS

Page 3 of 3

CANADIAN CERTIFIED GENERAL ACCOUNTANTS' ASSOCIATION

AUDITING 417 EXAMINATION
MARCH 1980

Marks

Time: 3 Hours

10 Q. 1 When you arrive at your client's office on January 11, 1980 to begin the December 31, 1979 audit, you discover the client had been drawing cheques as creditors' invoices became due but not necessarily mailing them. Because of a working capital shortage some cheques may have been held for two or three weeks.

The client informs you that unmailed cheques totalling $25,000 were on hand at December 31, 1979. He states these December dated cheques had been entered in the cash disbursements book and charged to the respective creditors' accounts in December because the cheques were prenumbered. Heavy collections in January permitted him to mail the cheques before your arrival. The client wants to adjust the cash balance and accounts payable at December 31 by $25,000 because the cash account had a credit balance. He objects to submitting to his bank your audit report showing an overdraft of cash.

REQUIRED:

In view of the above situation, list the detailed audit procedures you would include in your regular cash audit programme to satisfy yourself of the accuracy of the cash balance on the client's financial statements.

15 Q. 2 The net income of the Achilles Co. Ltd. for the year ended December 31, 1979, according to its income statement, was $400,000. The company desired a loan from its local bank, and the bank engaged you to audit the Achilles Co. Ltd. During your audit, you discovered the omission or inclusion of the following information:

(a) Of the $400,000 net income, $30,000 was realized from the sale of capital assets at that amount above book value.
(b) Depreciation expense was understated to the extent of $25,000.
(c) Machinery costing $30,000 was manufactured by the company for its own use and was placed on the books at $35,000, the $5,000 being credited to income.
(d) Dividends of $40,000 had been declared on November 1, 1979, payable on January 10, 1980, to shareholders of record December 15, 1979.
(e) In order to comply with the terms of a deed of trust in connection with a bond issue, $60,000 should have been set aside in a sinking fund on December 31, 1979; it was not set aside.
(f) Sales of certain investment securities had been made during the year, and a loss of $58,000 was involved, which had been debited to Retained Earnings.

REQUIRED:

Prepare, in good form, a working paper adjusting net operating income and reported net income.

10 Q. 3 One of your clients which has never before invested in securities recently acquired more than a million dollars in cash from the sale of real estate no longer used in operations.

The president of the company, who intends to invest the money in marketable securities until such time as the opportunity arises for advantageous acquisition of a new plant site, has asked for your advice concerning internal control over securities.

REQUIRED:

List the principal factors you would recommend to create a strong system of internal control over marketable securities.

10 Q. 4 Audit confirmations are usually regarded as the best quality of documentary evidence available to the auditor.

REQUIRED:

(a) What is an audit confirmation?

(b) What characteristics should an audit confirmation possess if a C.G.A. firm is to consider it as valid evidence?

(c) Distinguish between a positive confirmation and a negative confirmation in the auditors' examination of accounts receivable.

(d) In confirming a client's accounts receivable, what characteristics should be present in the accounts if the C.G.A. firm is to use negative confirmations?

10 Q. 5 A company using a small computer operating with punched cards wishes to mechanize only receipts and disbursements. The system would involve perforating cards for each amount received and for each cheque made. Prenumbered receipts (original and one copy) are prepared for each amount received, and prenumbered cheques (original and one copy) are prepared for each disbursement authorized. The information to be punched from copies of receipts would include the receipt number and the account number, while the information to be punched from copies of cheques would also include the cheque number and the account number. Daily computer listing of cards would now replace the cash receipts and disbursements book. Summary cards would be punched from the totals for daily computer listings and used to prepare monthly summary listings for receipts and disbursements.

REQUIRED:

As internal auditor of the company, state what would be the additional *control procedures* required to maintain an effective system of internal control.

15 Q. 6 In March the Anson Company ordered for resale. standard merchandise (that is, merchandise not made to its special order), at a cost of $150,000 which it had not received by June 30, the close of its fiscal year.

REQUIRED:

(a) Explain under what conditions the Anson Company should show this amount as a liability on its balance sheet as of June 30.

(b) Explain under what conditions it is proper for the Anson Company to omit this amount as a liability on its balance sheet as of June 30.

(c) Explain how this amount should be treated, if at all, on the balance sheet of the Anson Company as of June 30, if it is not shown as a liability.

Give adequate reasons for your answer to each part of this question.

15 Q. 7 Why does the shareholders' auditor perform each of the following audit procedures relating to inventory verification?

(a) Review the client's stocktaking procedures.

(b) Attend the physical stocktaking.

(c) Confirm stock held for the account of the client by third parties.

(d) Test check pricing.

(e) Test check count sheets to perpetual inventory records.

15 Q. 8 Select the *best* answer for each of the following items. Answer each of these items in your examination booklet by giving the letter of your choice. For example, if "b" is the best answer for item 1, write 1"b" in your booklet. Select only *one* answer for each item. If more than one answer is given, that item will *not* be marked. Wrong answers will be graded as zero and *no* further marks will be deducted. *No* account will be taken of any explanations you offer.

1. In connection with his review of plant additions, C.G.A. ordinarily would take exception to the capitalization of the cost of the:

   (a) Major reconditioning of a recently acquired second-hand lift truck.
   (b) Machine operator's wages during a period of testing and adjusting new machinery.
   (c) Room partitions installed at the request of a new long-term lessee in the client's office building.
   (d) Maintenance of an unused stand-by plant.
   (e) None of the above.

2. At the beginning of his first audit of a small business, the auditor found that the client's general ledger was out of balance. The best course of action for the auditor is to:

   (a) Say nothing to the client or the client's employees until he has investigated sufficiently to know whether the lack of balance is the result of fraud or accidental errors.
   (b) Request the client's staff to locate the error or errors and correct the accounts.
   (c) Estimate the additional audit time involved and inform the client that the audit fee will have to be increased because of less than satisfactory condition of the records.
   (d) Continue with normal auditing procedures on the assumption that the error or errors will become apparent as the audit progresses.

3. A, C.G.A., has sold his public accounting practice to D, C.G.A.

(a) A must obtain permission from his clients before making available working papers and other documents to D.
(b) A must obtain permission from his clients for only audit related working papers and other documents before making them available to D.
(c) A must return the working papers and other documents to his clients, and D must solicit the clients for his use of the materials.
(d) A must obtain permission from his clients for only tax related working papers and other documents before making them available to D.

4. A cut-off bank statement is obtained by the auditor:

(a) As the basis for a second independent and complete bank reconciliation.
(b) To determine whether cheques issued by the client subsequent to the balance sheet date were mailed promptly.
(c) To see that year end reconciling items have cleared the bank.
(d) To ascertain that only prenumbered cheques are currently being used.

5. The C.G.A.'s examination normally would not include:

(a) Determining that dividend declarations have been in compliance with debt agreements.
(b) Tracing the authorization of the dividend from the directors' minutes.
(c) Detail tracing from the dividend payment list to the share capital records.
(d) Reviewing the bank reconciliation for the imprest dividend account.

6. Audit programmes are modified to suit the circumstances on particular engagements. A complete audit programme for an engagement generally should be developed:

(a) Prior to beginning the actual audit work.
(b) After the auditor has completed an evaluation of the existing internal accounting control.
(c) After reviewing the client's accounting records and procedures.
(d) When the audit engagement letter is prepared.

7. On January 15, 1980, before the Ajax Co. Ltd. released its financial statements for the year ended December 31, 1979, Drew, a customer, declared bankruptcy. Drew has had a history of financial difficulty. Ajax estimates that it will suffer a material loss on an account receivable from Drew. How should this loss be disclosed or recognized?

(a) The loss should be disclosed in footnotes to the financial statements, but the financial statements themselves need not be adjusted.
(b) The loss should be disclosed in an explanatory paragraph in the auditor's report.
(c) No disclosure or recognition is required.
(d) The financial statements should be adjusted to recognize the loss.

8. Which of the following internal control procedures will *most* likely prevent the concealment of a cash shortage resulting from the improper write off of a trade account receivable?

(a) Write offs must be approved by a responsible officer after review of credit department recommendations and supporting evidence.
(b) Write offs must be supported by an aging schedule showing that only receivables overdue several months have been written off.
(c) Write offs must be approved by the cashier who is in a position to know if the receivables have, in fact, been collected.
(d) Write offs must be authorized by company field sales employees who are in a position to determine the financial standing of the customers.

Page 4 of 5

9. Which of the following is the *best* way for an auditor to determine that every name on a company's payroll is that of a bona fide employee presently on the job?

   (a) Examine personnel records for accuracy and completeness.
   (b) Make a surprise observation of the company's regular distribution of pay cheques.
   (c) Examine employees' names listed on payroll tax returns for agreement with payroll accounting records.
   (d) Visit the working areas and confirm with employees their badge or identification numbers.

10. Which of the following is one of the better auditing techniques that might be used by an auditor to detect kiting between inter-company banks?

   (a) Review composition of authenticated deposit slips.
   (b) Review subsequent bank statements received directly from the banks.
   (c) Prepare a schedule of bank transfers.
   (d) Prepare year end bank reconciliations.

100

END OF EXAMINATION

CANADIAN CERTIFIED GENERAL ACCOUNTANTS' ASSOCIATION
AUDITING 417 EXAMINATION
MARCH, 1980
EXAMINER'S COMMENTS

General

As this was a relatively easy examination, the results were extremely disappointing. Far too many candidates failed to read and understand the questions and consequently produced inadequate answers. Many answers would have been inadequate for a first level examination let alone a fourth level one. Many candidates displayed a complete lack of knowledge of Auditing Terminology and relied solely on the word 'check' to describe auditing procedures.

Specific

Q.1 Not well done. A large number of candidates totally ignored the information given in the question. For instance, it states in the question that the Auditor arrives on January 11, 1980 to *begin* the December 31, 1979 audit, therefore, it is not possible to perform auditing procedures on December 31, but many candidates wasted valuable time and effort stating what they would do on that day. It was evident that many candidates do not know:

(a) that a bank reconciliation does *not* come from the bank,
(b) that merely obtaining a cut off bank statement does *not* solve anything,
(c) that kiting and lapping are *not* the same,
(d) that working capital and the current ratio are *not* affected in the same way by a change in cash and a similar change in current liabilities.

Q.2 Well done. Several candidates did not distinguish between Net Operating Income and Net Income, and others ignored the words 'In Good Form' and thus did not avail themselves to the marks available for this requirement.

Q.3 Reasonably well done. Most candidates were able to state the principal factors involved. Candidates who did not know the factors, and those who did not read the question, tended to produce long lists of unrelated duties which should be segregated, or assumed that the *only* method of achieving a strong system of internal control was to turn everything over to an independent safekeeping agent; obviously these are not adequate answers to the question.

Q.4 Generally, this question was well done by the majority of candidates.

Q.5 Not well done. Many candidates assumed that *no* control procedures existed and proceeded to develop *all* the necessary controls; others reacted to the word 'computer' and proceeded to develop computer controls. The question clearly indicates that what is required is the *additional* control procedures necessary for the new system that is being instituted by the company.

Q.6 Not well done. Many candidates failed to grasp the relationship between showing an item as a liability and the rules of law governing the passage of title to goods.

Q.7 Not well done. Many candidates spent much of their time describing why this auditor *verifies* inventory but the question asks why the auditor *performs certain procedures relating to inventory verification*, which is quite different. Part (d) was most poorly done with many candidates completely concerned with mathematical accuracy of extensions and totals. Answers found in many of the parts, suggesting that auditors perform certain procedures because they are 'required to', were unacceptable.

Q.8 Well done.

CANADIAN CERTIFIED GENERAL ACCOUNTANTS' ASSOCIATION

AUDITING 417 EXAMINATION
MARCH 1980
SUGGESTED SOLUTIONS

Marks

Time: 3 Hours

10 Q. 1 In addition to the regular cash audit programme, the audit procedures should be as follows:

1. Obtain a list, if available, of the cheques comprising the $25,000 including cheque numbers, amounts and dates mailed.
2. Confirm the bank balance at December 31 and audit the client's bank reconciliation using the usual audit steps in connection with bank and cash reconciliation.
3. Obtain the cutoff bank statement and cancelled cheques directly from the bank.
4. Scrutinize each cheque returned by the bank and indicate on the list submitted by the client the date the cheque was deposited by the creditor and the date the cheque was charged to the client's account. Those cheques deposited by the creditors after January 6 and posted to the client's account after January 7 may be assumed, in the absence of other evidence, to have been unmailed at December 31. Those cheques which cleared either the creditor's or client's bank by January 5 were probably mailed on or before December 31.
5. The client should be advised that, if he continues this practice, he should request the auditor to inspect the cheques on hand on the last day of the year to substantiate the reversing entry.

15 Q. 2

Achilles Co. Ltd.
Adjustments to Net Income
December 31, 1979

A 3-1
K.S.
Jan 20 1980

Reported net income		$400,000
Less: (a) Gain on sale of capital assets	$ 30,000	
(b) Depreciation understated	25,000	
(c) Gain on equipment manufactured	5,000	60,000
Net Operating Income		340,000
Extraordinary items		
(f) Loss on sales of investment securities	58,000	
Less: (a) Gain on sale of capital assets	30,000	28,000
ADJUSTED NET INCOME		$312,000

(a) The $30,000 gain from the sale of capital assets should be shown as an extraordinary item.
(b) Net income should be reduced by $25,000 due to understated depreciation.
(c) The machinery should be capitalized at $30,000. The $5,000 should not appear as a gain under any circumstances.
(d) Dividend declaration has no effect on the income statement. However, the $40,000 should appear on the balance sheet as a current liability.
(e) Sinking fund payments have no effect on the income statement. However, $60,000 should be transferred.
(f) The loss of $58,000 should be shown as an extraordinary item..

10 Q. 3 An adequate system of internal control over securities should include the following features:

1. Separation of custody of securities from record keeping.
2. Detailed records of securities owned and related revenue from interest and dividends.
3. Authorization of purchases and sales by investment committee.
4. Registration of securities in name of company.
5. Periodic inspection of securities by an internal auditor or official not charged with custody of securities or record keeping.

10 Q. 4 (a) An audit confirmation is a written communication received by the auditors directly from a party outside the client organization. The written confirmation usually affirms the validity of an amount recorded in the client's accounting records.

(b) To be valid evidence, an audit confirmation must be received directly by the C.G.A. firm from the outside party who has written the confirmation.

(c) A positive confirmation requires a reply from the client's customer in every case. A negative confirmation requires a reply only if the balance for which confirmation has been requested is incorrect.

(d) If the C.G.A. firm is to use negative confirmations in the audit of accounts receivable, internal control for the receivables must be strong, and the receivables must include a large number of individual accounts with small balances. The auditors must also believe that the recipients of negative confirmation requests will give them appropriate consideration.

10 Q. 5 Procedures to be followed:

1. Copies of receipts and cheques should be remitted daily to the Data Processing Department, using a special transfer form for each type of document, stating the number of such documents remitted together with the total amount involved.
2. After cards are punched, the documents (copies of receipts and cheques) should be stamped to indicate that they have been processed (i.e., converted into an input document).
3. A comparison of account numbers should be made to detect invalid ones and make immediate corrections.
4. The sequential order followed in the listing should be that of the receipt or cheque numbers.
5. The listing should indicate the total number of documents processed, the total amount involved, and any missing document number.
6. The process should provide for the following checks and for signatures identifying the persons who carried them out:
   a. Comparison of control totals on listings and transfer documents.
   b. Verification of sequential order from one listing to the other and accounting for missing numbers.
   c. Comparison of monthly summary listings and daily listings totals.
   d. Monthly mechanized bank reconciliation involving punched cards for all cheques returned by the bank and a comparison with those already made for all cheques issued.

15 Q. 6 (a) The liability should be shown on the balance sheet of the Anson Company as of June 30 if title to the merchandise has passed under the express or implied terms of the sales agreement or under established rules of law governing the passing of title where there is no specific provision in the contract. Under these rules the liability should be shown:

1. If the merchandise in a deliverable state has been set aside for the Anson Company with its assent.
2. If the merchandise has been delivered to a carrier for purpose of transmission to the Anson Company under a sales agreement that requires the buyer to pay the delivery charges; e.g. a c.i.f. contract or a f.o.b. warehouse shipment.

(b) The amount may be omitted as a liability if title has not passed on or before June 30. Assuming no agreement to the contrary, title would not have passed and the liability need not be shown:

1. If the merchandise has not been unconditionally appropriated to the contract by the seller with the consent of the Anson Company.
2. If delivery was made to the carrier in accordance with contract terms that require the seller to pay freight; e.g. f.o.b. destination.

(c) If at June 30, the Anson Company did not have title to the merchandise so that it might properly omit the asset and the related liability from its balance sheet as of that date, the following is accepted practice:

1. Disclose the purchase commitment of $150,000 by footnote if it is unusually large in relation to total purchases. No disclosure is necessary for a commitment which is normal for the Anson Company.
2. Any net loss on the purchase commitment, measured in the same way as inventory losses, should be reflected by a liability account. If the Anson Company had firm sales contracts or assured future sales orders at prices which will recover cost of the merchandise with an approximately normal profit on sale in the ordinary course of business, no loss need be recognized in the accounts.

15 Q. 7 Reasons why the shareholders' auditor performs each of the following audit procedures relating to inventory verification:

(a) Review the client's stocktaking procedures.
1. To determine what procedures the client intends to follow for physical stocktaking.
2. To determine whether these procedures are adequate to provide a reliable inventory determination.

(b) Attend the physical stocktaking.
1. To verify that the inventory exists.
2. To check, by test count, that the quantities reported are correct.
3. To evaluate, by observation, (a) the extent to which the client's staff follow laid down procedures, and (b) the care taken by the client's staff in stocktaking.
4. To observe the physical condition of the goods and to note any evidence of slow moving stock.

(c) Confirm stock held for the account of the client by third parties.
1. To establish the physical location of stock belonging to the client.
2. To determine that stock so held agrees with the records of the client.
3. To establish, if possible, the physical condition of such inventory.

(d) Test check pricing.
1. To establish the basis for valuing inventory.
2. To establish that the balance sheet terminology as to "lower of cost and market", or any other description, is appropriate.
3. To establish that the basis used for valuing inventory is consistent with that of the previous year.
4. To establish that damaged or obsolete materials are included at fair value, below cost.

(e) Test check count sheets to perpetual inventory records.
1. To determine that the inventory records accurately reflect the stock on hand as physically counted.
2. To determine the disposition of differences between physical and book inventories.

15 Q. 8 1. (d); 2. (b); 3. (a); 4. (c); 5. (c); 6. (b); 7. (d); 8. (a); 9. (b); 10. (c)

100

END OF SOLUTIONS

AUDITING 417 EXAMINATION
JUNE, 1980

MARKS | Time: 3 Hours

10 Q. 1 Birmingham Ltd. engaged you to review its internal control system. Birmingham does not prelist cash receipts before they are recorded and has other weaknesses in processing collections of trade receivables, the company's largest asset. In discussing the matter with the controller, you find he is chiefly interested in economy when he assigns duties to the ten office personnel. He feels the main considerations are that the work should be done by people who are familiar with it, capable of doing it and available when it has to be done.

The controller says he has excellent control over trade receivables because receivables are pledged as security for a continually renewable bank loan and the bank sends out positive confirmation requests occasionally, based on a list of pledged receivables furnished by the company each week. You learn that the bank's internal auditor is satisfied if he gets an acceptable response on seventy percent of his requests.

REQUIRED:

(4) (a) Explain briefly how prelisting of cash receipts strengthens internal control over cash.

(6) (b) Assume that an employee handles cash receipts from trade customers before they are recorded. List six duties which that employee should not perform in order to avoid giving him the opportunity to conceal embezzlement of cash receipts.

15 Q. 2 On July 10, 1980 you were engaged to make an examination of the financial statements of Broke Automotive Ltd. for the year ended May 31, 1980. Broke has sold trucks and truck parts and accessories for many years, but has never had an audit. Broke maintains good perpetual records for all inventories and takes a complete physical inventory each December 31 and May 31. The Parts Inventory account includes the $3,500 cost of obsolete parts. Broke executives acknowledge these parts have been worthless for several years but they have continued to carry the cost as an asset. The amount of $3,500 is material in relation to the 1979/1980 net income and year end inventories but not material in relation to total assets or capital at May 31, 1980.

REQUIRED:

(10) (a) List the procedures you would add to your inventory audit programme for new trucks because you did not observe the physical inventory taken by Broke Automotive Ltd. as of May 31, 1980.

(5) (b) Should the $3,500 of obsolete parts be carried in inventory as an asset? Discuss and justify your decision.

15 Q. 3 You are performing your first examination of the financial statements of a company that maintains the following books:

(a) Sales register.
(b) Sales returns register.
(c) Voucher register.
(d) Payroll register.
(e) Cheque register.

REQUIRED:

List the above registers and state what you would accept as satisfactory documentary evidence in support of entries in each register.

15 Q. 4 The Belfast Company Ltd. sells on a 2/10, n/30 basis. Internal control is quite weak, so the senior accountant in charge of the examination of the company's financial statements asks you to make a careful review of the cash receipts book for the month of July, which is reproduced below. The company allows one day's grace for mailing time on payments received involving discounts. The company's year end is December 31, 1979 and your examination takes place in January 1980.

CASH RECEIPTS

Date	Account	Particulars	Cash	Cash Sales	Discount	Accounts Receivable
7/2	Adams	6/10 Invoice	$1,300			$1,300
7/5	Baker	6/24 Invoice	784		$ 16	800
7/6	Cash sales		50	$ 50		
7/10	Carson	6/30 Invoice	588		12	600
7/11	Cash sales		25	25		
7/12	Baker	7/1 Invoice	294		6	300
7/13	Cash sales		32	32		
7/14	Adams	7/3 Invoice	877		23	900
7/15	Cash sales		38	38		
7/16	Baker	7/1 Invoice	686		14	700
7/18	Cash sales		30	30		
7/20	Carson	7/9 Invoice	578		12	600
7/22	Cash sales		27	27		
7/27	Baker	7/16 Invoice	490		10	500
			$5,789	$192	$103	$5,700

REQUIRED:
Prepare, in good form, a working paper summarizing any discrepancies in this cash receipts book. Clearly indicate the accounts that require adjustment.

10 Q. 5 During the audit of a mercantile and manufacturing company, you are given the following list of phases of the business and its operation upon which you are asked to express an adequate opinion:

1. The adequacy of the accounting system.
2. Productive processes and merchandising methods.
3. The productive efficiency of machinery.
4. The effectiveness of the system of internal control.
5. The accuracy of the accounting records.
6. The value of obsolete inventory.
7. The accuracy and the adequacy of all underlying accounting documents.
8. The present value of fixed assets in controlled companies.
9. The legality of *all* documents and transactions.
10. The accuracy of the income.
11. The cost of all assets.
12. The book value of all assets.

REQUIRED:
List the items upon which you are not qualified to express an adequate opinion.

10 Q 6. In a properly planned examination of financial statements, the auditor coordinates his reviews of specific balance sheet and income statement accounts. A properly designed audit programme enables the auditor to determine conditions or establish relationships in more than one way.

REQUIRED:
Give the *procedures* used by the auditor which might lead to the detection of an inadequate Allowance For Doubtful Accounts.

PAGE 2 OF 4

10 Q. 7 In examining the financial statements of Brooks Ltd., you observe a debit entry for $30,000 labelled as "Dividends" in the Retained Earnings account.

REQUIRED:
Explain in detail how you would verify this entry.

15 Q. 8 Select the *best* answer for each of the following items. Answer each of these items in your examination booklet by giving the letter of your choice. For example, if "b" is the best answer for item 1, write 1 "b" in your booklet. Select only *one* answer for each item. If more than one answer is given, that item will *not* be marked. Wrong answers will be graded as zero and *no* further marks will be deducted. *No* account will be taken of any explanations you offer.

1. The auditor's study and evaluation of internal control is done for each of the following reasons *except*:
   (a) To provide a basis for constructive service suggestions.
   (b) To aid in the determination of the nature, timing and extent of audit tests.
   (c) To establish a basis for reliance thereon.
   (d) To provide training and development for staff accountants.

2. The auditor's programme for the examination of long term debt should include steps that require the:
   (a) Verification of the existence of the bondholders.
   (b) Examination of any bond trust indenture.
   (c) Inspection of the accounts payable subsidiary ledger.
   (d) Investigation of credits to the bond interest income account.

3. When auditing contingent liabilities, which of the following procedures would be *least* effective?
   (a) Abstracting the minutes of the board of directors.
   (b) Reviewing the bank confirmation letter.
   (c) Examining customer confirmation replies.
   (d) Examining invoices for professional services.

4. Preliminary arrangements agreed to by the auditor and the client should be reduced to writing by the auditor. The *best* place to set forth these arrangements is in:
   (a) A memorandum to be placed in the permanent section of the auditing working papers.
   (b) An engagement letter.
   (c) A client representation letter.
   (d) A confirmation letter attached to the constructive services letter.

Continued....

5. In several examinations of Bell Company, the auditors had found internal controls applicable to Prepaid Insurance to be quite strong and consistently followed. Under these conditions, which of the following audit procedures might well be omitted?
   (a) Obtain and examine all insurance policies.
   (b) Confirm insurance coverage directly with the client's insurance broker.
   (c) Obtain a copy of the insurance register or an analysis of the Prepaid Insurance ledger account.
   (d) Test computations of insurance expense and ending balances of prepaid and accrued insurance.

6. A C.G.A. reviews a client's payroll procedures. The C.G.A. would consider internal control to be less than effective if a payroll department supervisor was assigned the responsibility for:
   (a) Hiring subordinate employees.
   (b) Reviewing and approving time reports for subordinate employees.
   (c) Distrubuting payroll cheques to employees.
   (d) Initiating requests for salary adjustments for subordinate employees.

7. A client's procurement system ends with the assumption of a liability and the eventual payment of the liability. Which of the following *best* describes the auditor's primary concern with respect to liabilities resulting from the procurement system?
   (a) Accounts payable are *not* materially understated.
   (b) Authority to incur liabilities is restricted to one designated person.
   (c) Acquisition of materials is *not* made from one vendor or one group of vendors.
   (d) Commitments for all purchases are made only after established competitive bidding procedures are followed.

8. Of the following procedures which is the *most* important that an auditor should use when making an overall review of the income statement?
   (a) Select sales and expense items and trace amounts to related supporting documents.
   (b) Compare actual revenues and expenses with the corresponding figures of the previous year and investigate significant differences.
   (c) Obtain from the proper client representatives, inventory certificates for the beginning and ending inventory amounts that were used to determine cost of sales.
   (d) Ascertain that the net income amount in the statement of changes in financial position agrees with the net income amount in the income statement.

9. A normal audit procedure is to analyze the current year's repairs and maintenance accounts to provide evidence in support of the audit proposition that:
   (a) Expenditures for fixed assets have been recorded in the proper period.
   (b) Capital expenditures have been properly authorized.
   (c) Noncapitalizable expenditures have been properly expensed.
   (d) Expenditures for fixed assets have been capitalized.

10. The primary purpose of tests of compliance is to provide reasonable assurance that:
   (a) The accounting and administrative control procedures are adequately designed to assure employee compliance therewith.
   (b) The accounting and administrative control procedures are being applied as prescribed.
   (c) The accounting control procedures are being applied as prescribed.
   (d) The administrative control procedures are being applied as prescribed.

100

END OF EXAMINATION

CANADIAN CERTIFIED GENERAL ACCOUNTANTS' ASSOCIATION
AUDITING 417 EXAMINATION
JUNE, 1980
EXAMINER'S COMMENTS

General

The results of this examination were extremely disappointing. The majority of candidates failed to read and understand the questions and thus produced inadequate answers. It is evident that many candidates have learned answers to previous questions and are determined to use these answers in their entirety without any regard for the fact that the question they are answering is only remotely connected with the answer they have learned. This is a very inefficient way to approach examinations.

Specific

Q.1 (a) This part was poorly answered. Most candidates did *not* explain *how* pre-listing strengthens internal control and many candidates obviously did not know what was meant by pre-listing. The key points are that the pre-listing must be made by someone who is independent of the cash handling recording functions, and a copy of the listing must be sent to *another* independent person for subsequent comparison with the bank deposit. Obviously internal control is *not* strengthened if the same person does the pre-listing, records the receipts and makes the subsequent check with the bank deposit.

(b) This part was answered a little better but many candidates listed duties that had nothing to do with the question. Several candidates listed many more duties than the six required by the question. Obviously only the *first* six were marked not the *best* six.

Q.2 (a) This part was very poorly answered. The question asks for procedures to be *added* to the inventory audit program because of non-observance of the May 31, 1980 physical inventory. Most candidates did not know how to handle this situation and simply listed every conceivable normal audit procedure. This 'scatter gun' approach would obviously pick up a few marks—but, not enough to avoid a negative effect on overall results. The correct technique, of course, is to take a *complete* physical inventory *now*, relate this to the 'good perpetual records' and audit the purchases and sales of trucks *back* to May 31, 1980. The inventory *now* is the most reliable starting point, no other approach will produce the desired result.

(b) This part was handled a little better. However, many candidates ignored the information, given in the question, that the obsolete parts were *worthless* and discussed, at great length, possible scrap values and/or net realizable values. In fact, much 'discussion' took place but very little 'justification'. Both were required.

Q.3 This question was fairly well done, probably because the candidates have acquired considerable work related experience with these basic registers and the documents required. The part that was answered the poorest was the voucher register. Those who performed poorly on this question did so because they either misinterpreted the question or simply did not read it carefully. Candidates in this group tended to answer the question by supplying audit procedures or internal controls for each register rather than the documentation that was required.

Q.4 This question was poorly done by many candidates who were unable to prepare a reasoned schedule with the objective of summarizing the discrepancies in the cash book. Many candidates failed to grasp the importance of the fact that the examination of the July, 1979 cash book takes place in January, 1980, consequently adjustments are required, *not* a re-writing of the cash book.

Q.5 This question was very well answered by most candidates. The few who did poorly were those who took some exception to the term 'adequate opinion'or to the use of the adjective 'all' in four of the listed phases. The examiner sees nothing misleading about these particular words — and neither did over 90% of the candidates.

An 'adequate' opinion may be positive or negative, but it is one on which the auditor is prepared to stake his reputation as a professional. 'All' documents or 'all' assests is perfectly usual. The audit is generally carried out on a test sample basis — but if the auditor feels this is not *reliable* enough with respect to 'all' then he would expand his tests of documents, transactions, etc. until he had obtained sufficient competent evidence. That decision must be made by the auditor.

Q.6 The performance on this question was poor. The majority of candidates recognized some of the documents the auditor would require for his examination but failed to point out how the auditor would use the documents. This is probably due to a lack of practical experience.

Q.7 Briefly the answers to this question were a shambles. The pass rate was low. The reasons for such a poor performance are as follows:

(a) Failure to read the question. The question was related to, but not entirely concerned with dividends.

(b) Insufficient answers. How a candidate can provide three short points to answer a ten mark question and expect to get full marks is incomprehensible.

(c) Lack of detail. Every candidate, without exception, would examine the minutes of the directors' meeting to see if a dividend had been declared. But very, very few stated what information they would look for in the Directors' Minutes.

(d) Vague answers such as 'review the books' (what is required is a detailed statement of *what* books) or 'check cancelled cheques' rather than examine the check register.

(e) Generally, a lack of knowledge of basic auditing procedures.

Q.8 Reasonably well done.

CANADIAN CERTIFIED GENERAL ACCOUNTANTS' ASSOCIATION

AUDITING 417 EXAMINATION
JUNE 1980
SUGGESTED SOLUTIONS

MARKS

Time: 3 Hours

10 Q. 1

(4) (a) The prelisting of cash receipts when used in conjunction with proper follow up procedures will strengthen a company's internal control substantially by safeguarding against unauthorized removals of incoming cash by employees whose duties would permit them to conceal the removals. An effective system of prelisting cash receipts normally provides for an employee with no other cash duties to open the mail and prepare a listing of the individual receipts included. The number of copies of the prelisting prepared will vary depending upon internal needs and procedures, but the significant point is that one copy of the prelisting must be controlled and later used by a responsible employee with no related duties to ascertain that all cash received in the mail has been entered in the cash book and credited by the bank or is otherwise satisfactorily accounted for.

(6) (b) The following duties should be excluded from the work of all employees who are in a position to intercept cash receipts from trade customers before they are recorded so that none of the same employees will have an opportunity also to conceal any unauthorized removals:
(Only six required)

1. Posting to the final cash receipts book.
2. Totalling the columns of the cash receipts book.
3. Preparing any cash receipts records to be used in posting.
4. Originating documents serving as customers' deductions.
5. Posting to the final sales and/or sales returns and allowances record.
6. Footing any sales and/or sales returns and allowances record to be used in posting.
7. Preparing any sales and/or sales returns and allowances records to be used in posting.
8. Approving credit memorandums, write offs or other journal entries affecting trade accounts receivable.
9. Posting charges or credits to the customer's individual accounts.

15 Q. 2

(10) (a) The C.G.A. should add the following procedures to his new truck inventory audit programme for Broke Automotive Ltd. because he did not observe the physical inventory taken by the company on May 31, 1980.

1. Physically examine all trucks on hand on July 10, 1980 and list each by serial number, make and model.
2. Determine that the July 10, 1980 truck count agrees with the perpetual records at that date.
3. Determine that trucks received between May 31, and July 10, 1980 as shown by the perpetual records are substantiated by supporting vendors invoices and receiving reports. Test for accuracy of receiving cutoff.
4. Determine that trucks sold between May 31 and July 10, 1980 as shown by the perpetual records are substantiated by supporting shipping or delivery documents and copies of sales invoices. Test for accuracy of sales cutoff.
5. Determine that the beginning balance (quantity) shown by the current truck perpetual records agrees with the quantity reported on the client's May 31, 1980 physical inventory tabulation.

PAGE 1 OF 3

(5) (b) No. The obsolete inventory of $3,500 should be charged off because:

1. Generally accepted accounting principles prescribe that a loss should be recognized as soon as an asset becomes worthless.
2. Overvalued assets will produce erroneous balance sheets repeatedly in future years.
3. An annual cost saving would result from a write off of the asset value, since the need for a complete annual physical inventory of the obsolete stock will remain as long as the asset value is carried. (It would be necessary to exercise some control over the obsolete stock after it is written off, however.)

15 Q. 3 The evidence commonly accepted in support of entries in each of the following are:

(a) Sales register
Copies of sales invoices and sales tickets, preferably consecutively numbered; cash register tapes; signed contracts; shipping records; customers' purchase orders.

(b) Sales returns register
Copies of consecutively numbered credit memoranda, properly approved; correspondence; receiving records.

(c) Voucher register
Vendors' invoices (originals) or signed contracts, properly approved by the accounting department, with attached receiving reports; consecutively numbered copies of purchase orders; freight bills.

(d) Payroll register
Approved time cards or piecework tickets; approved wage and salary increases or decrease notices; personnel department records; union contracts; contracts with individual employees (including officers); paid cheques; payroll receipts, if any; C.P.P., U.I.C. and income tax withholding records.

(e) Cheque register
Approved vendors' invoices; paid cheques; signed vouchers; bank statements.

15 Q. 4

Belfast Company Ltd.
Analysis of Cash Receipts Book
July 1979

E 3
K.S.
Jan 15, 1980
Adjustments Dr - (Cr)

Items	Cash	Cash Sales	Discount
Cash receipts underfooted	$10		
Cash sales underfooted		$(10)	
Discount overfooted			$(10)
7/20 cash from Carson understated	10		
7/14 discount overstated, cash received understated (1)	5		(5)
7/16 late payment, assumed that no discount was taken (2)	14		(14)
Adjustments required	$39	$(10)	$(29)

(1) If it is assumed that Adams remitted the amount shown by the cash receipts book, the correcting debit of $5 should be to accounts receivable Adams.

(2) If it is assumed that Baker remitted the amount shown by the cash receipts book, the correcting debit of $14 should be to accounts receivable Baker.

10 Q. 5 The auditor is not qualified to express an adequate opinion upon the following items:

(2) Productive processes and merchandising methods.
(3) The productive efficiency of machinery.
(6) The value of obsolete inventory.
(8) The present value of fixed assets in controlled companies.
(9) The legality of *all* documents and transactions.

10 Q. 6 In evaluating the Allowance For Doubtful Accounts, the auditor will perform the following procedures:

1. Compare the allowance as a percentage of receivables and the year's provision as a percentage of credit sales to prior year's percentages and evaluate reasonableness in terms of current economic conditions and credit policies.
2. Review an aging of accounts receivables and investigate the collectibility of overdue accounts.
3. Discuss collection problems and the adequacy of the Allowance For Doubtful Accounts with the credit manager or other responsible employee. (It may be necessary to extend this discussion to the company's lawyer or collection agent.)
4. Follow up on confirmation responses and non responses that indicate collection problems.
5. Evaluate the reasonableness of cash collections of accounts receivable during the subsequent period.

10 Q. 7 Verification of the entry in Retained Earnings for Dividends of $30,000 would include tracing the entry to the general journal and the dividend declaration to the minutes of directors' meetings. From the minutes, the auditor would determine the nature of the dividend (cash or stock), the amount per share, date of declaration, date of record, and date of payment. The total amount to be distributed should also be determined by extending the amount per share by the total number of shares outstanding. If the dividend was paid as well as declared during the period under audit, the auditor should verify payment by reference to the cash disbursement records and by enquiry of the dividend paying agent if one is retained. If the payment date falls after the balance sheet date, the auditor should ascertain that any cash dividend payable is included among the current liabilities and that adequate disclosure is made for any stock dividend distributable.

15 Q. 8 1. (d)
2. (b)
3. (c)
4. (b)
5. (a)
6. (c)
7. (a)
8. (b)
9. (d)
10. (c)

100

END OF SOLUTIONS

CANADIAN CERTIFIED GENERAL ACCOUNTANTS' ASSOCIATION

ORGANIZATIONAL BEHAVIOUR 500 EXAMINATION

JANUARY, 1980

Marks **Time: 3 hours**

10 Q. 1. Below are two lists of names, concepts, techniques, etc.

Required:

Match each item in the left hand list with the appropriate item in the right hand list.

(a) Interpersonal approach	(1) Image of CGA's
(b) Interaction between person and situation	(2) Bureaucracy
(c) Traditional structural approaches	(3) Defensive communication climates
(d) Occupational stereotyping	(4) Blue-collar blues
(e) Impact of budgets	(5) S↔O↔B↔A
(f) MBO	(6) Performance Reward Satisfaction
(g) Defensiveness	(7) Group problem solving
(h) Job features that insult the ego	(8) Genetic vs. situational approaches
(i) Job attitudes and motivation	(9) Goal setting
(j) The Starfish analogy	(10) Barriers between finance and factory people

20 Q. 2. The Sims Company, a manufacturer of automobile parts and accessories for large department stores who sell these parts under their private labels, is having difficulty in meeting production deadlines and attracting good management talent. Assume that you have been asked to help management solve these problems. According to the President of the Sims Company, the overall corporate objective is to obtain a 20 per cent sales profit margin. The President said that one way to realize this objective was for the manufacturing division to reduce manufacturing cost by 4 percent within the year.

Required:

Explain specifically how you could use one of the expectancy models of motivation to help the President of the Sims Company achieve his objective.

10 Q. 3. **Multiple choice (2marks each)**

Required: Select the most appropriate answer to each of the following:

(a) In most organizations, managerial decisions are actually evaluated most often on the basis of:

(i) information known when the decision was made.
(ii) cost analysis.
(iii) results.
(iv) objective decision criteria.

(b) The influence of "situational factors" on job performance is:

(i) as one of the four variables that enter directly into an individual's performance.
(ii) mediated through valence and expectancy.
(iii) essentially as a hygiene factor.
(iv) mediated through abilities, role perception, and motivation.

(c) Which one of the following statements about self-motivated achievers is most correct?

(i) They like to set their own goals.
(ii) They set goals that are neither too difficult nor too easy.
(iii) They like to get feedback about how they are doing.
(iv) All of the above.

(d) The practice of ascribing our own characteristics to other people and using ourselves as the norm for judging others is called:

(i) projection.
(ii) perception.
(iii) stereotyping.
(iv) first impression formation.

(e) Concerning the size of a group:

(i) the optimum size is between 8 and 12.
(ii) cohesiveness and size are inversely proportional.
(iii) there is no evidence that size affects the performance of group members.
(iv) increases in group size can have both positive and negative influences on performance of members.

NOTE: The next two questions (Question 4 and 5) are based on the following case.

Hank Sidney has been president of his company for seven years and initially things had gone very well. Sales increased an average of 17 percent a year, and return on investment during this period had never been lower than 15.3 percent. However slowly but surely other firms began to realize the kind of profits that could be attained in the industry and they began moving in. As they did, competition increased and the big profit margins began to shrink. Prices dropped as each company tried to capture and retain large market shares. Within a few years, Hank's firm was barely able to keep its head above water. It was then that the board of directors decided that Hank had to go.

This was not an easy choice for the directors to make. Everyone liked Hank. He was a pleasant, easy going, friendly individual. The management respected him and the workers seemed to hold him in the highest regard. Nevertheless, the board felt that the president was unable to turn the company around, and they would have to get someone who could.

The eventual choice was Fred Whitney, a general manager who worked for one of the company's competitors. Fred told the board that he would take the job only if he were allowed to do things his way. In turn, he promised results. The board agreed.

Within six months of his appointment, Fred had fired over half of the old management team and one-third of the workers. In addition, he refused to hire any new personnel. If someone quit or was fired, the others were required to pick up his work. When asked about this, Fred gave the following explanation:

"When I came here the company was going broke. There were too many people in management positions who were doing nothing. I got rid of them. The workers were having a field day. The average guy was putting in a five-hour day. Well, I changed all that by tightening things up. Now everyone around here has to pull his own weight. There's no room for fat when a company is in trouble, so I got rid of it."

It was difficult to argue with Fred in light of the fact that his leadership style seemed to get results. For example, within 18 months of the time he took over, the company had as large a share of the market as ever and return on investment had risen to over 16 percent.

Some of the directors, however, felt that Fred's style was too rough. They believed that the company was going to get in trouble if it thought a task-oriented manager could continue to achieve such results in the long-run. These directors acknowledged the fact that Fred had been very successful thus far, but they wondered if there would not be a backlash. Doesn't the task-centered manager run the risk of driving off his best workers and irreparably damaging morale? they asked. One of the directors compared Fred with a fast gun in the old west. "You know," he said, "a fast gun would be brought in to save the town. But once he had done his job the mayor would have to get rid of him because he was bad for the town's reputation. I think Fred falls into this category." The chairman of the board disagreed. "We were elected by the stockholders to protect their interests. When we brought in Fred we told him he could do things his way. Besides, we have to evaluate a man's leadership style by how effective it is. And Fred sure has been effective." On this point no one had anything to say.

5 Q. 4. Why was Hank ineffective in turning the company around? Be specific.

15 Q. 5. How do you account for the resulting profit achieved by Fred? Explain briefly supporting your position with specific material covered in the course.

15 Q. 6. State briefly and explain ten reasons for the failure of many programs of Management by Objectives.

15 Q. 7. Explain the following statement: "Organizations are viewed as co-operative efforts or coalitions entered into by individuals in order to achieve personal objectives which cannot be realized without such co-operation." Justify this statement in the light of the present management structure of business organizations with which you are familiar.

10 Q. 8. Explain how accounting and budgetary procedures can help and hinder the processes of organization development.

100

END OF EXAMINATION

CANADIAN CERTIFIED GENERAL ACCOUNTANTS' ASSOCIATION
ORGANIZATIONAL BEHAVIOR 500 EXAMINATION
JANUARY 1980
EXAMINER'S COMMENTS

General

Students handled much of the material requiring note memorization adequately (see exceptions noted below) but seemed unable to *apply* course materials to case materials.

Specific

Q.1 There was no discernable pattern of problems.

Q.2 Many students failed to apply one of the expectancy models of motivation to the mini-case. They apparently did not know or understand these models.

Q.3 There was no discernable pattern of problems.

Q.4 Many students failed to analyze the situation and use course materials to support their statements. This is attributed to lack of qualitative analytical skills and knowledge of course materials.

Q.5 See comments on preceding question.

Q.6 Reasons were inadequately explained or not explained at all.

Q.7 Many students failed to draw on course material in answering this question. This is attributed to lack of qualitative analytical skills.

Q.8 Many students failed to show understanding of the processes of organization development. Answers showed excessive enchantment with budgets and lack of understanding of the interaction between accounting and budgetary processes on the one hand and organization development processes on the other.

CANADIAN CERTIFIED GENERAL ACCOUNTANTS' ASSOCIATION

ORGANIZATIONAL BEHAVIOUR 500 EXAMINATION

JANUARY, 1980

SUGGESTED SOLUTIONS

Marks | Time: 3 hours

Marks			
10	Q. 1.	a — 8	f — 9
		b — 5	g — 3
		c — 2	h — 4
		d — 1	i — 6
		e — 10	j — 7

20 Q. 2. The answer to this question may draw on the Vroom, Porter, and Lawler or Lawler Hybrid model of motivation. The student must show understanding and ability to apply the concepts of valence, expectancy 1 and expectancy 2 to the task of identifying outcomes of sufficient value to the President that can realistically be expected to follow an increased level of performance.

10 Q. 3.
a — 3
b — 4
c — 4
d — 1
e — 4

5 Q. 4. Hank was ineffective in turning the company around because he had an unappropriate leadership style. When things were going well, as seen in Fiedler's contingency model of leadership, he did fine. However, when things started to deteriorate he was unable to keep them from getting out of hand.

15 Q. 5. The company needed a tough, results oriented manager. The student should demonstrate how Fiedler's contingency model indicates this need.

15 Q. 6. Any of the reasons presented in the selection by Odiorne "Twenty Common Errors in Goalsetting" in Lesson 9 will count toward full marks for this question.

15 Q. 7. The answer to this question should draw on understanding of Lesson Four and show how the current conception of organizations takes into account the personal goals of the individuals who manage it, the tradeoffs they negotiate with each other, and the changes that take place in organizational programs, policies, etc. as the individuals who form the ruling coalition come and go or gain and lose power and influence. This view should be contrasted with the traditional structural view as summarized by Lichtman and Hunt.

10 Q. 8. The answer to this question may draw upon the objectives of typical OD programs as stated by French. If the student elects this approach he should demonstrate how traditional accounting and budgetary procedures can contravene the objective of OD by sustaining the atmosphere of inflexible control and highly centralized decision-making. Alternatively, the student may draw from Ways' selection of Tomorrow's Management with particular emphasis on the section of this article entitled the White Space Between the Boxes. Similar support can be found in the articles by Likert and Flamholtz. Few students may reach back earlier in the course and draw upon the concepts of personalistic organizations outlined in the Lichtman and Hunt reading or on Caplan's criticisms of managerial accounting.

100

END OF SOLUTIONS

PAGE 1 OF 1

CANADIAN CERTIFIED GENERAL ACCOUNTANTS' ASSOCIATION

ORGANIZATIONAL BEHAVIOUR 500 EXAMINATION

MARCH, 1980

Marks

Time: 3 Hours

10 Q. 1. Below are two lists of names, concepts, techniques, etc.

Required:

Match each item on the left-hand list with the appropriate item in the right-hand list.

a. Situational determinents	1. Selective perception
b. Redesign of jobs	2. S↔O↔B↔A
c. Pressures for attitudinal uniformity	3. Effective performance appraisal
d. Interaction between person and situation	4. Fiedler's approach to leadership
e. Competition for scarce resources	5. Constructive use of conflict
f. Departmental identification	6. Core dimensions
g. Mutual setting of specific goals	7. Scientific Management
h. R. Likert	8. Law of Effect
i. Hedonism	9. Latent Conflict
j. Search for the "one best way".	10. Exclusion of deviates.

20 Q. 2. It has been argued that groups serve a number of important functions for individuals. State briefly and explain five ways in which an individual might be affected by **work group** membership.

20 Q. 3. Multiple choice **(2 marks each)**

Required:

Select the most appropriate answer to each of the following:

(a) Which one of the following is the best illustration of "halo-effect"?

(i) Since I am looking for a job, I tend to be more aware of announcements of job openings.

(ii) I tend to be more productive as I become aware that someone is paying more attention to me.

(iii) Since I am such a perfectly reasonable person, I conclude most everyone else is also reasonable.

(iv) Since the man has demonstrated to me that he is unreliable, I will conclude that he is also stupid.

(b) Which one of the following best illustrates "selective distortion"?

(i) I was raised a Liberal and, therefore, I always vote Liberal.

(ii) After purchasing a 1978 red MGB, I notice that the town seems to be full of 1978 red MGB's.

(iii) I feel a depression coming and every economic indicator I see confirms my feelings — in spite of what the experts say.

(iv) Since I'm looking forward to a trip to Disney World, I seem to observe and pay more attention to TV and magazine Disney World commercials.

(c) Which one of the following statements about self-motivated achievers is most correct?

(i) They like to set their own goals.

(ii) They set goals that are neither too difficult nor too easy.

(iii) They like to get feedback about how they are doing.

(iv) All of the above.

(d) In addition to his five basic needs, Abraham Maslow postulates a basic desire to:

(i) Love

(ii) Achieve

(iii) Compete

(iv) Understand

(e) Which of the following is **not** related to traditional structural approaches to organization?

(i) Scientific management

(ii) Operations research

(iii) Social systems theory

(iv) Managerial accounting

(f) The most widely supported view of the job satisfaction - job performance relationship is:

(i) Satisfaction → Performance

(ii) Performance → Satisfaction

(iii) Satisfaction → Pressure → Performance

(iv) None of the above.

(g) The essence of communication is that it is the conveyance of:

(i) Data

(ii) Symbols

(iii) The meaning of information

(iv) Verbal and non-verbal messages

(h) Which one of the following statements is most correct about the contingency approach to leadership?

The contingency approach states that:

(i) Leadership style is unimportant

(ii) Situational variables are unimportant

(iii) There are three major dimensions of the group task situation.

(iv) Employees make two basic probability estimates concerning their job behaviour.

(i) Insofar as an organizational change requires a change in the behaviour of people, it is useful to think in terms of a three-phase change process. The process includes a ______________ phase.

(i) driving

(ii) unfreezing

(iii) restraining

(iv) unilateral

(j) Concerning change, managers are confronted with a paradox having to do with the demands of:

(i) future shock

(ii) change and stability

(iii) adaptive behaviour

(iv) efficiency and human relations

NOTE:

The next three questions (Questions 4, 5 & 6) are based on the following scenario:

Consider the following situation. As a CGA you are employed by a medium-sized firm that offers a wide range of managerial and accounting services to its clients including the design of diversified management systems.

One of your client firms is a medium-sized (600 employees) company that manufactures a high quality line of electronic instruments for use in medium to large size pleasure and commercial boats (e.g., depth-sounders, radios, loud hailers, etc.). These products are marketed through a network of authorized distributors that extends across Canada and the U.S. The industry is highly competitive with 12-15 manufacturers offering variations of the same product line. The company is privately owned, non-union and has been in business for 23 years. Its financial structure is considered sound. Until recently, the company enjoyed about 15% of the product market but, over the past 18 months, this position has eroded. Quality control has deteriorated resulting in increasing customer warranty claims. Productivity is off in the factory. In addition, management feels that the sales force (8 men) is not performing as effectively as could be. Finally, in common with most other firms, this one is experiencing rapidly rising costs both in labour and materials. The top manager of the client firm has asked your firm to develop a comprehensive set of recommendations aimed at correcting the situations summarized above.

20 Q. 4. Explain specifically how you would use Lawler's Hybrid Model of Motivation as a diagnostic tool in seeking to find out what is wrong in the various departments and hierarchal levels of this company (e.g. sales, production, quality control, middle management).

10 Q. 5. You are asked to evaluate the behavioural assumptions underlying Management Accounting in the firm described in the preceding question.

Required:

State briefly five assumptions or practices that might contribute to the situation in which the firm finds itself.

20 Q. 6. At a meeting with the management of the client firm you are asked to explain the concept of organization development and the action research process.

Required:

(2) (a) Briefly define the concept of organization development.

(6) (b) List in point form the SIX STAGES in the action research model of organization development.

(12) (c) What is the contribution of each stage?
Why is the action research approach preferred for achieving successful organizational change?

100

END OF EXAMINATION

CANADIAN CERTIFIED GENERAL ACCOUNTANTS' ASSOCIATION
ORGANIZATIONAL BEHAVIOR 500 EXAMINATION
MARCH, 1980
EXAMINER'S COMMENTS

Specific

Q.1 Students generally handled this question well.

Q.2 The distribution of marks supported the reasonableness of this question but performance was skewed low normal.

Q.3 These multiple choice questions have been thoroughly tested and validated with respect to structure and to course material. Students however, were unable to deal with them adequately suggesting inadequate knowledge of the subject matter.

Q.4 Here again student performance sustained the expectation that the question was feasible, but performance by the examinees as a group was poor. Either the students failed to read previous examinations of the course instructors or the markers failed to emphasize the importance of expectancy theory although virtually every examination throughout the history of this course has included a question on this topic.

Q.5 There were no significant difficulties with this question.

Q.6 The range of marks for this question was from 0 to the maximum possible (20) with a slightly higher than normal distribution of marks.

CANADIAN CERTIFIED GENERAL ACCOUNTANTS' ASSOCIATION
ORGANIZATIONAL BEHAVIOUR 500 EXAMINATION
MARCH, 1980
SUGGESTED SOLUTIONS

Marks

Time: 3 Hours

10 Q. 1.

a. — 4	f. — 1
b. — 6	g. — 3
c. — 10	h. — 5
d. — 2	i. — 8
e. — 9	j. — 7

20 Q. 2. Satisfactory answers to this question can be based on either the arguments presented by Cartwright and Lippit in the reading entitled "Group Dynamics and the Individual"or on Maier's "Assets and Liabilities in Group Problem Solving: the Need for an Integrative Function" or on Likert's "The Nature of Highly Effective Groups". Of course, a reasonable synthesis of the arguments presented by these three authors is likewise acceptable. In any case, the answer should show that the student understands the impacts that groups have on individuals both with respect to their feelings, attitudes and behaviour and with respect to the satisfaction they provide for deepseated needs for such things as affiliation, affection, recognition, and self-esteem. The answer should note that groups may produce both good and bad consequences for both the individual and the organization through their pressures for uniformity through group standards, their rejection of deviates and their definition of positions and roles. If the answer focuses on group problem solving, a clear statement of the assets and liabilities associated with this approach should be stated.

20 Q. 3.

a. — iv	f. — iv
b. — ii	g. — iii
c. — iv	h. — iii
d. — iv	i. — ii
e. — iii	j. — ii

20 Q. 4. Demonstration of both knowledge and understanding of Lawler's Model is essential for successful treatment of this question. The student must go beyond the concepts of Expectancy I & II and Valence and show how variables such as Problem Solving Style and Perceived Equity of Reward could be influencing behaviour at crucial points in the company.

10 Q. 5. Adequate material for evaluation of the students' answers to this question will be found in Table I of Caplan's article "Behavioral assumptions of managerial accounting" presented in Lesson 4. Any of the assumptions listed in Table I will count toward full marks for this question.

20 Q. 6. (2) (a) French defines organization development as a long-range effort to improve an organization's problem-solving capabilities and its ability to cope with changes in its external environment with the help of external or internal behavioral-science consultants or "change agents" as they are sometimes called. Any definition offered by the student that contains the essential ingredients of French's definition earns full marks.

(6) (b) The six stages of the action research model are diagnosis, data gathering, feedback to the client group, data discussion and work by the client group, action planning and action.

(12) (c) The student's answer should reflect an understanding of the "why" and "so what" or expected benefits of each stage. Further, that the sequence tends to be cyclical, moving to new or more advanced problems as the client group learns to work more effectively together. The action research model is preferred because it gains commitment at all levels when carefully implemented and has been found to lead to appropriate and lasting change.

100

END OF SOLUTIONS

ADVANCED TAXATION 509 EXAMINATION
JANUARY, 1980

Marks **Time: 3 hours**

Notes:

1. This examination is based on the 50th edition of the INCOME TAX ACT as it stood on July 15, 1978. **Please write down the date and edition of the I.T.A. that you are using** and any subsequent amendments on which you based your study for this examination on the inside cover of your examination booklet.

2. To obtain full marks to a question, you should reference your answers to the applicable provision/s in the I.T.A. If a reference to one or more sections in the main body of the Act and to the ITAR provisions is required, the applicable reference should be given with the relevant part of your solution.

3. You should try to keep within the suggested time given when answering a particular question, since exceeding the time limit may affect your overall performance.

4. Round all calculations to the nearest dollar.

10 Q. 1. Suggested Time 15 minutes

Mr J borrowed $130,000 from a corporation, of which he was both chief executive officer and majority shareholder, during the period January to December 1979. The corporation's fiscal period ends on December 31st. Of the amount borrowed, $120,000 was for the purpose of acquiring a new home for Mr J and his family close by the corporation's new head offices in Calgary (Mr J's former home was in Toronto, and he claimed moving expenses for his 1979 taxation year). The balance of $10,000 was borrowed for strictly personal uses to cover unforeseen expenses, and was charged to Mr J's shareholder's loan account. Arrangements were made to repay the housing loan over a period of 20 years as follows:

> Interest payable in the initial year (1979), $4,800; in each succeeding year, interest payable will be reduced by $240.
>
> The principal amount of the loan is to be amortized by $6,000 each year. You are to assume that this reduction takes effect at **the end** of the corporation's fiscal period.

Assume that by December 31, 1980 Mr J had not repaid anything on the personal loan, and his shareholder's loan account thus stood at a debit balance of $10,000 at that time. No interest had been paid on the personal use loan.

Required:
Determine the amounts, if any, of adjustments to be made to Mr. J's 1979 reported income for tax purposes.

35 Q. 2 Suggested Time 55 minutes

The autobody business operated by the ABC partnership (a Canadian partnership, all of the members of which were resident in Canada) since 1968 was sold effective September 30, 1978. The balance sheet of the partnership just prior to the sale of the business and the proceeds received thereon are shown below:

Assets	Balance Sheet Amounts	Proceeds
Cash	$ 4,000	$ N/A
Inventory	20,000	19,000
Accounts Receivable (Note 1)	25,000	20,000
Equipment (Note 2)	12,000	22,000
Land (Note 3)	20,000	70,000
Buildings (Note 4)	95,000	275,400
Goodwill	—	120,000
	176,000	$526,400
Partners' Drawings		
Partner 'A'	25,000	For the six month period ended September 30, 1978
'B'	15,500	
'C'	16,300	
	$232,800	
Liabilities	$ 18,000	
Partners' Capitals		
Partner 'A'	52,500	As at March 31, 1978
'B'	43,500	
'C'	46,800	
Net Income for the six month period ended September 30, 1978	72,000	
	$232,800	

Note 1: The partnership and the purchaser did not elect under S.22 of the Act.

Note 2: Capital cost of equipment was $55,000; UCC $12,000.

Note 3: FMV of land on V-Day was $44,500

Note 4: Capital cost of building was $139,500; UCC $95,000 and FMV on V-Day was $198,000.

Other information

(i) The capital accounts as shown above were equal to the ACB's of the partners at the particular time.

(ii) Profits and losses are shared equally between the partners. The partners also have equal interests in the net assets of the partnership.

(iii) The partnership has outstanding net capital losses of $10,500. These losses were still available to the partners at the time of the wind-up of the partnership.

(iv) The fiscal period of the partnership ends on March 31st. Partnership income for the period ended March 31, 1978 was $150,000.

(v) The net proceeds arising from the sale and wind-up of the partnership were distributed to the partners on December 10, 1978.

Required:

(8) (a) What is the **minimum** amount to be included in computing each partner's income for the **1978 taxation year?** State your reasons as well as showing the relevant amounts.

(24) (b) Determine the amounts that must be included in computing each partner's income for the 1979 taxation year.

(3) (c) How may the partners defer the tax consequences of certain amounts that would be included in their income for the 1979 taxation year other than by investing in a RRSP?

Hint: In the case where a partnership has been wound up, proceeds arising from the disposition of a partnership interest is considered to be part of a partner's income for the taxation year in which the wind up is considered to have taken place.

10 Q. 3 Suggested Time 15 minutes

Mr. Tax Dabbler is the accountant for D company, a Canadian-controlled private corporation resident in British Columbia. Mr D, the chief officer and sole shareholder of D Company, has informed Mr Dabbler that he does not want to pay any taxes for his 1979 taxation year, and for this reason, he did not take any salary during D company's 1979 fiscal year, which ended December 31. D company's profits before taxes for its 1979 fiscal year were $50,000. The profit was all from active business income. The combined federal and provincial tax rate is thus 27%.

Mr. Dabbler had recently become aware of the beneficial effects of the new dividend gross-up and tax credit structure, and he began to make certain calculations based on personal exemptions of $6,000 available to Mr D for 1979. After some experimentation, he discovered that a cash dividend of $36,000 could be paid to Mr D, with the result that provincial taxes of about $73 only would be payable. After corporation taxes of $13,500 and the dividend of $36,000 had been paid, the retained earnings of D company would stand at $500. When Mr Dabbler explained to Mr D that he could receive $36,000 in dividends and pay only $73 in provincial taxes, Mr D was very pleased and told Mr Dabbler to go ahead with his plan. Mr D added that he was so pleased with the result that he offered to pay Mr Dabbler's bill on the spot.

Required:
Evaluate Mr. Dabbler's plan without making calculations. Has he overlooked any fundamental principle or relationship important to tax planning as it relates to Canadian-controlled private corporations? Point out any major oversight that, if corrected, would reduce corporation taxes without causing any increase in taxes to be paid by Mr. D. For this purpose, make any corollary assumption, again without proving it by calculations.

30 Q. 4 Suggested Time 50 minutes

With the new definition of paid up capital and the repeal of the paid-up capital deficiency and the paid-up capital limit provisions, all effective from April 1, 1977, paid-up capital for tax purposes is equated with paid-up capital for corporate purposes. This change can cause problems in determining the capital structure of a corporation in the case where a tax-free transfer of assets is desired to be made pursuant to S.85 of the Act and if, at the time of the wind-up of the corporation, the shareholders would prefer to receive taxable proceeds of disposition in the form of a taxable dividend rather than as a taxable capital gain.

Required

Note: You may assume that the various provincial statutes and the federal statute governing incorporation will not affect your solution as it applies to the paid up capital of the corporation. This assumption is to hold true for both part (a) and part (b) of this question.

(15) (a) Discuss the problem in **detail** in essay form. You are to assume that only share consideration is to be received in exchange for **capital property** transferred to a corporation.

(b) Consider the following information:

FMV of capital property	$60,000
ACB thereof	$20,000
S.85 elected amount	$20,000
Paid up capital issued	?

(5) (i) The property is to be transferred to Corporation A by Mr. K, who is to be the sole shareholder. Assuming that Mr. K would like to realize any gain arising from the ultimate disposition of his shares when the corporation is wound up as a taxable dividend rather than as a taxable capital gain, at what amount should the paid up capital be issued? Explain your reasons. An illustration by way of calculations is not required here. You may assume that your recommended paid up capital can be implemented without destroying the effectiveness of S.85.

(10) (ii) Suppose paid up capital was issued in the amount of $60,000 and the corporation sold the property at its FMV of the same amount shortly after the S.85 transfer. Assuming a combined federal and provincial rate of 51%, the after tax proceeds (ignoring any potential RDTOH) would be $49,800 as a result of the taxable capital gain of $20,000.

If the shareholder came to you and requested you to wind up the company and distribute the $49,800 as proceeds of disposition received in respect of the cancellation of the shares, what action would you take **before** the shares were surrendered for cancellation? Illustrate your approach, assuming that the shareholder's effective rate of tax was 48%. That is, show the result if you merely did as the shareholder requested, and compare this with the result that would obtain from the action taken by you.

15 Q. 5 Suggested Time 20 minutes

Mr. T, a Canadian citizen resident in B.C., is the sole beneficiary of a trust resident in the U.S.A. The income of the trust in prior years had consisted of U.S. dividends and interest. In the current year, the trust would in addition be receiving interest on Canadian corporate and government bonds. The government bonds were issued in March 1976; half of the corporate bonds were issued in January 1974 and the other half in April 1976. All of the income is first received by the trust, which then allocates income to Mr. Y on a discretionary basis. However, the trust's policy in recent years has been to allocate all of its income to Mr. T.

Mr. T is concerned that the Canadian source income could be subject to double or even triple taxation. He has been told that the Canadian payors will deduct withholding taxes on the gross amount of interest; the net amount then received by the trust will also be subject to U.S. withholding taxes once it has been allocated to Mr. T, and finally, the balance will be taxed once more in Canada in Mr. T's hands as ordinary interest income. Mr. T is particularly unhappy about the rigid stance taken by Revenue Canada in interpreting the source concept of income received from a foreign country. According to IT-270, income from a Canadian source that is subject to foreign withholding taxes would be excluded from the numerator described in S.126(1). Moreover, S.126(7)(c) and S.20(11) operate to ensure that withholding taxes in excess of 15% cannot be used as a foreign tax credit, but must be deducted against income from investments. Mr. T made these points in order to illustrate the possibilities of double taxation occurring. Mr. T has no other income other than that received from the trust.

Required:
Is the information given to Mr. T correct? Explain the tax consequences of the dividend and interest receipts in detail. First discuss the U.S. source income and then the Canadian source income. You may assume that the trust is **not** one to which S.94(1) would apply; also, that the Canadian corporate bonds are not redeemable until 1984.

100 END OF EXAMINATION

CANADIAN CERTIFIED GENERAL ACCOUNTANTS' ASSOCIATION
ADVANCED TAXATION 509 EXAMINATION
JANUARY 1980
EXAMINER'S COMMENTS

General

The results of this examination were, in the main, very disappointing. They indicate that far too many students do their assignments in a superficial way, and do not *study* the material of the course. Enrollment in Advanced Taxation presumes that the student intends to make Taxation a focal part of his career. It is not possible to view Advanced Taxation as a general interest course and to have too much hope of passing the examination.

Specific

Q.1 Most did reasonably well on this question. Common errors made by those who did not do so well were:

(i) Calculating s.80.4 interest on the personal use loan of $10,000.

(ii) Including the housing loan (less the basic reduction of $50,000) in income.

(iii) Describing the effect of s.80.4 in a general way instead of making the calculation.

Q.2 In this comprehensive question on partnerships and other basic sections of the Act, a surprising number of errors were made which, one would have thought, would have occurred at the 4th year level rather than at the 5th year level.

(i) Deducting the entire loss on receivables against income instead of half of it.

(ii) Itar 21(1) goodwill factor calculated incorrectly or not at all.

(iii) Ignoring cash on hand and liabilities when determining net proceeds to be distributed to the partners.

(iv) Not calculating the gain arising from the disposition of the partnership interests in spite of being virtually told to do so in the question. Thirteen marks were lost because of this.

(v) Instead of determining the gain on the disposition of *each* partner's interest, lumping them all into one.

(vi) Omitting to identify s.99(2) as the operative provision re the election to defer income earned for the six month period ended Sept. 78 as well as the gain on the disposition of the partnership interests to the 1979 taxation year.

(vii) Adding tbe proceeds from inventory and A/C receivable to income instead of determining the losses thereon.

(viii) Including net capital losses in calculation of ACB of a partnership interest.

(ix) Omitting non-taxable portion of capital gains and goodwill when calculating the ACB of a partnership interest.

Q.3 A diverse number of solutions were offered to this question. The following were the most common errors and omissions.

(i) Many reasoned why a salary of $20,000 — $50,000 should be accrued in 1979 and paid out in 1980. While this was not viewed as a basic error, it did show a lack of understanding of the situation described in the question. An accrued salary merely defers taxes, it does not reduce them. The real thrust of the question was in obtaining recognition that the corporation and the shareholder should be considered as one entity for tax purposes.

(ii) A good number thought that the dividend refund had been overlooked, basing it only on the dividend paid of $36,000. Those who took this approach should bear in mind that this potential recovery of taxes depends more on the existence of qualifying investment income than on the mere payment of a dividend.

(iii) Others thought that the payment of the $36,000 dividend would result in a dividend strip subject to s.247 of the Act.

(iv) It was amazing how many thought that the SBD and M & P tax credits had been overlooked. One would have thought that these tax reductions were implicit in the tax rate of 27% *given* in the question.

Q. 4 The subject matter of this question was covered in great detail in the lesson notes. However, the answers given were, in the main, very disappointing. The major errors and omissions were:

(i) No discussion of shareholders' position.

(ii) Did not explain how to force PUC to desired amount.

(iii) Instead of thinking their way through the question, many copied from CCH or M. Tax guides when answering part (a). If they did not understand what they wrote, their answers to part (b) showed it.

(iv) Too many merely discussed aspects of s.85 and did not identify the problems inherent in determining the PUC when using that section to transfer a capital property to a corporation. Others discussed a s.88(1) wind-up. Both discussions were, of course, irrelevant to the real thrust of the question.

(v) Many missed the pay-out of the Cap.D.A. in answering part (b) of the question.

(vi) A good number confused the PUC with the ACB of the shares in part (b)(iii) of the question. They were not the same thing at all.

Q.5 Variations of this question had been asked in previous examinations. It was confidently expected that most would have done very well. Unfortunately, this was not the case. Common errors and omissions were:

(i) Very few commented on the non-applicability of s.20(11) even though some coverage by the students was clearly called for in the question.

(ii) Many students referred to Art.XII of the Canada-U.S. tax convention in error. The situation envisaged by this provision has no application to the situation posed by the question. It is Art.XIII-E that exempts Canadian source income from U.S. withholding taxes.

(iii) In spite of being told that the U.S. trust was not one to which s.94(1) applied, some students insisted on discussing the FAPI rules.

(iv) The double taxation problem was not sufficiently analyzed; therefore, the remedial sections in the Act were not identified.

A Suggestion and Request

While the examiner does not deduct marks for illegible writing, he may find it difficult, if not impossible to credit marks if he cannot read what is written.

CANADIAN CERTIFIED GENERAL ACCOUNTANTS' ASSOCIATION

ADVANCED TAXATION 509 EXAMINATION
JANUARY, 1980
SUGGESTED SOLUTIONS

Marks

Time: 3 hours

10 Q. 1 **Amount to be included in Mr. J's 1979 taxation year**

The loan to acquire a new home for Mr. J is exempt under S.15(2)(ii) from the penalizing effect of that section. The loan also qualifies for preferential treatment as a 'housing loan' under S.80.4.

However, the $10,000 unpaid balance of the personal use loan would be included in Mr. J's income for his 1979 taxation year pursuant to S.15(2)(b). In addition, Mr. J would be deemed to have received a benefit under S.80.4 with respect to the housing loan of $120,000 as follows:

Interest at prescribed rate		
9% (120,000)		$10,800
Less:		
Interest paid	$4,800	
S.80.4(c)(ii) amount		
9% (50,000)	4,500	9,300
		1,500
Less:		
S.80.4(e) amount		500
Deemed Benefit		$ 1,000

Thus, total amount to be included in Mr. J's income for 1979 is $11,000.

No interest is chargeable on the $10,000 personal use loan by virtue of S.80.4(2)(a)(ii).

Note: Should a student use 8% rather than 9% as the prescribed rate of interest, full marks will be awarded.

35 Q. 2 (a) The minimum amount to be included in each partner's income for the 1978 taxation year will
consist of partnership income earned during the 1978 fiscal year of the partnership, as ended on
March 31, 1978. To obtain the deferral of income earned for the partial fiscal period ended
(8) September 30, 1978 and any gain arising from the disposition of a partnership interest, each
partner must elect under S.99(2) of the Act.

Thus, each partner will report ⅓ (150,000) = $50,000 in respect of his 1978 taxation year.

* (b)	**Partner A**	**Partner B**	**Partner C**
Net income for the six month period ended Sept. 30, 1978	$24,000	$24,000	$24,000
Add:			
Net gain from sale of business (Schedule 1)	48,150	48,150	48,150
Taxable capital gain from disposition of partnership interests (Schedule 3)	20,417	20,167	18,917
	92,567	92,317	91,067
Deduct:			
Net capital losses of prior years	3,500	3,500	3,500
Income to be reported for the 1979 taxation year	$89,067	$88,817	$87,567

*For marking, please see schedules below

Schedule 1 — Net gain arising from sale of business

	Cash Proceeds	**S.53(2)(c) S.53(1)(e) Amounts**	
Cash on hand	$ 4,000	$ —	
Inventory	19,000	(1,000)	
Accounts Receivable	20,000	(5,000)*	
Equipment	22,000	10,000	Recapture
Land	70,000	25,500	Cap. gain
(11) Buildings	275,400	44,500	Recapture
		77,400	Cap. gain
Goodwill	120,000	84,000	ITAR 21(1)
	$530,400	235,400**	
Add: *Non-allowable portion of capital loss on accounts receivable		2,500	
		237,900	
Deduct: Non-taxable portion of capital gains		51,450	
		186,450	
Deduct: Non-taxable portion of eligible capital amount		42,000	
Net gain for tax purposes		$144,450	

**Increases ACB's of partnership interests

Schedule 2 Cash available for distribution to partners

	Cash proceeds (Schedule 1)	$530,400
(2)	Less: Payment on account of liabilities	18,000
	Net cash available for distribution	$512,400
	or $170,800 to each partner	

Schedule 3 — Taxable Capital Gain arising from disposition of partnership interests

		Partner A	Partner B	Partner C
	Distribution of cash proceeds (Schedule 2)	$170,800(1)	$170,800(1)	$170,800(1)
	ACB's of partnership interests as at September 30, 1978			
	ACB's as at March 31, 1978	$ 52,500	$ 43,500	$ 46,800
	Add:			
	Net Income for the six month period ended September 30, 1978	24,000	24,000	24,000
(11)	Additions to ACB's — S.53(1)(e) (Schedule 1)	78,467	78,467	78,467
		$154,967	$145,967	$149,267
	Less:			
	Drawings for the six month period ended September 30, 1978	25,000	15,500	16,300
		$129,967(2)	$130,467(2)	$132,967(2)
	Capital gain (1) - (2)	$ 40,833	$ 40,333	$ 37,833
	Taxable capital gain	$ 20,417	$ 20,167	$ 18,917

(3) (c) The recapture of CCA, taxable capital gains and taxable portion of the eligible capital amount are qualifying income for the purposes of S.61 of the Act. Thus, taxes could be deferred by purchases of an IAAC.

Marking Note: Allot one mark for each item of qualifying income.

10 Q. 3 Mr. Dabbler has ignored the fundamental relationship between Mr. D and his corporation. For the purpose of minimizing overall taxes, the corporation and the employee/shareholder should be considered as one taxpayer. Since the corporation's effective tax rate is 27%, this suggests that the proper
(5) mixture of salary and dividends paid to Mr. D that would result in an effective tax rate to him of something less than 27% would produce overall savings.

Mr. Dabbler's major oversight was in overlooking the ability of the corporation to pay a salary at least equal to Mr. Dabbler's personal exemptions of $6,000. This would have reduced corporation taxes by $1,620. In order to avoid Mr. D having to pay any taxes, the dividend to be paid to him would have to
(5) be reduced. In this way, an overall tax saving would have been achieved in an amount equal to the corporations effective rate on Mr. D's personal exemptions.

Note: The above solution is not intended to provide the optimal mixture of salary and dividends, since this was not asked for in the question. Thus, any answer that clearly recognizes that taxes will be minimized only when the tax position of the company and the shareholder are considered as one will be acceptable for full marks. The student should, however, observe that a salary could have been paid in an amount equal to Mr. D's personal exemptions.

PAGE 3 OF 5

Marks

30 Q. 4 (a) The question assumes that, under the new dividend gross-up and tax credit structure, it would in most cases be more beneficial for a shareholder to receive taxable proceeds of disposition of his shares upon cancellation or redemption as a taxable dividend rather than as a taxable capital gain. The basic difficulty of the new definition, is that paid up capital issued by the corporation could be equated with the FMV of the property transferred to the corporation under S.85. Upon the sale of the property, the after tax proceeds distributed to the shareholder would, in effect, be on account of a return of paid up capital, since paid up capital for tax purposes would be the same as for corporate purposes. Thus, the after tax proceeds would not operate to deem a dividend to have been paid under S.84 of the Act, and the shareholder would be forced to pay tax on a taxable capital gain rather than on a taxable dividend. This would occur because the ACB of his shares would be less

(15) than the paid up capital thereof.

Moreover, in the case of a capital property, the after tax proceeds following the sale thereof by the corporation would also be adversely affected by the same circumstances, since if no dividend is deemed to have been paid, then potential RDTOH cannot be recovered in the form of a dividend refund. It would also be necessary for the corporation to pay out the CAP. D.A. before the redemption or cancellation of the shares took place, in order to reduce the capital gain that would be taxable in the hands of the shareholder at the time his shares are redeemed.

(b) (i) The paid up capital should be equal to the ACB of the property transferred to the corporation, i.e. $20,000. In order to force paid up capital to this amount, par value shares should be issued. Upon the ultimate redemption or cancellation of the shares, the proceeds in excess of the paid up capital would be a deemed dividend under S.84. The only difficulty appears to lie in the recording process when the property is originally transferred to the corporation. In order to force paid up

(5) capital to the ACB (elected amount per S.85) of the property and to ensure that the proceeds would be taxable as a deemed dividend, the property would have to be shown on the Balance Sheet at its ACB of $20,000 rather than its FMV of $60,000.*

*A perceptive student would realize this difficulty and probably comment on it. Since however, the Lesson Notes did not expand on this result of 'forcing' paid up capital, no marks should be lost if such comment is not made.

Under certain jurisdictions (e.g. Manitoba and Federal statutes) par value shares are not permitted. If a student's solution does not include a par value approach specifically because he refers to this fact, his solution may be accepted for full marks if it is supported in an intelligent manner; e.g. he may refer to "stated capital" as being equivalent to par value for the purpose of the question.

PAGE 4 OF 5

(b) (ii) **Result if shareholder's request acted upon**

	Proceeds	$49,800
	ACB of cancelled shares	20,000
	Capital gain	$29,800
(4)	Taxable capital gain	$14,900
	Tax thereon at 48%	$ 7,152

Result of correct implementation of wind-up

The capital dividend account of $20,000 should be elected upon pursuant to S.83(2) before the shares are surrendered for cancellation. The remaining amount to be distributed of $29,800 will be in consideration of the paid up capital and will result in the following tax consequences:

(6)	Proceeds	$29,800
	ACB of cancelled shares	20,000
	Capital gain	$ 9,800
	Taxable capital gain	$ 4,900
	Tax thereon at 48%	$ 2,352

Thus, there is a tax saving of $4,800 if the correct approach is used.

Marking guide

It is not expected that the answers of the students be as comprehensive as the SS. The marker may credit full marks if a good grasp is shown of the basic principles. In the examiner's opinion, the recognition of the need to pay out the CAP. D.A. is worth at least two marks in part (a) and four marks in part (b)(ii).

15 Q. 5 The information given to Mr. T is not correct. With regard to U.S. dividends and interest income, U.S. withholding taxes are restricted to 15% on the gross amounts allocated to Mr. T. Thus, Mr. T should be
(4) able to claim the full amount as a foreign tax credit per S.126(1). S.20(11) would not apply, since it operates only in respect of withholding taxes in excess of 15% of the gross amount of dividends and interest included in income. See also Article XI of the Canada-U.S. tax convention.

With respect to Canadian source income, no withholding tax applies in Canada on the Canadian government bonds (S.212(1)(b)(ii)(C)). Neither would Canadian withholding tax be deducted from the corporate bonds issued in April 1976. (S.212(1)(b)(vii)). However, although Canadian withholding taxes would be deducted in respect of the corporate bonds issued in January 1974, since this issue does not fall within the exception under S.212(1)(b)(vii), no U.S. withholding taxes would be
(8) applicable on the interest thereon by reason of Article XIII-E of the tax convention. This article applies to exempt from U.S. withholding taxes any amount that is distributed by an estate or trust resident in the U.S.A. where that amount was originally received from a non-U.S. source.

Mr. T will be taxable pursuant to S.2(1) on all of the income received from the trust. However, he will be able to claim the $1000 interest income deduction under S.110.1 with respect to Canadian source
(3) interest income, and will also be permitted to claim the full amount of the Canadian withholding taxes deducted by the Canadian payors against income taxes otherwise payable.

100

END OF SOLUTIONS

CANADIAN CERTIFIED GENERAL ACCOUNTANTS' ASSOCIATION
ADVANCED TAXATION 509 EXAMINATION
MARCH, 1980

Marks **Time: 3 Hours**

Notes:

1. This examination is based on the 50th edition of the INCOME TAX ACT as it stood on July 15, 1978. **Please write down the date and edition of the I.T.A. that you are using and any subsequent amendments on which you based your study** for this examination on the inside cover of your examination booklet.
2. To obtain full marks to a question, you should reference your answers to the applicable provision/s in the I.T.A. If a reference to one or more sections in the main body of the Act and to the ITAR provisions is required, the applicable reference should be given with the relevant part of your solution.
3. You should try to keep within the suggested time given when answering a particular question, since exceeding the time limit may affect your overall performance.
4. Round all calculations to the nearest dollar.

15 Q. 1. **Suggested Time: 20 minutes**

Between the period January to December 1978, Mr. G contributed the following amounts to RRSP's taken out in his name and in the name of his spouse:

Mr. G's plan	$ 5,000	(Paid January to July 1978)
Mrs. G's plan	$ 5,000	(Paid in November 1978)
	$10,000	

Of the total amount contributed, $4,000 was deductible against Mr. G's income for his 1977 taxation year. Mr. G's total earned income for his 1978 taxation year was $15,000.

On August 1, 1979 Mr. G was surprised to receive a notice of initial assessment from Revenue Canada, which read as follows:

'Your taxable income for the 1978 taxation year has been adjusted by excess payments made in respect of your RRSP. Revised taxable income is $10,200. An explanation has been sent to you by letter (Form T462) mailed separately.'

Mr. G came to you for advice on August 2, 1979.

Required:

(6) (a) Determine the tax consequences, if any, to Mr. G in respect of contributions made in his 1978 taxation year. You may assume that half of any excess applies to Mr. G's plan, and the other half to Mrs. G's plan.

(9) (b) What immediate steps would you ask Mr. G to take in order to minimize the tax consequences in (a) above? Calculate the minimum tax consequence, assuming that Mr. G's effective tax rate was 18%, and that your advice would take practical effect before the end of August 1979. For the purpose of this question, you are to ignore any interest on unpaid taxes, if they would otherwise be applicable.

40 Q. 2. **Suggested Time: 65 minutes**

Mr. M has heard that a Canadian-controlled private corporation qualifies for an effective tax reduction of 25% on its active business income. His proprietorship (a service business specializing in radio and television repairs operated since 1967) has now reached a stage of growth where Mr. M expects that current income from the business would place him in a 50% plus tax bracket. A business friend has told Mr. M that he could transfer the assets of the proprietorship under S.85(1) of the Act to a corporation at no tax cost, either to himself or to the corporation. Mr. M wishes to do this as soon as possible, and presents you with a list of the following assets that he proposes to elect on:

	Tax Cost to Mr. M	Elected Amount	FMV prior to transfer
Inventory	$ 30,000	$ 30,000	$ 45,000
Accounts Receivable	40,000	40,000	38,000
Equipment (UCC) (Note 1)	60,000	60,000	81,000
Building (UCC) (Note 1)	92,000	92,000	161,000
Land	70,000	70,000	100,000
Goodwill (Note 2)	—	—	96,000
	$292,000	$292,000	$521,000

NOTE 1 Capital cost of equipment was $95,000, and that of the building was $130,000. FMV of equipment on V-day was $75,000, and that of the building was $145,000.

NOTE 2 Mr. M does not wish to elect to transfer any goodwill into the corporation.

Other Information

(i) Mr. M believes that he will fulfill the requirements of S.85 if he takes back consideration in the form of a note payable for $291,000 and 1000 common shares at an issue price of $1.00 each. However, Mr. M wishes to take things a little easier, and proposes to have the corporation issue an additional 2000 common shares to his two sons. The issue price will also be $1.00 each, and each son will contribute $1000 for his shares. Mr. M states that this approach will enable him to take sufficient income for his needs and will also ensure that the future growth of the business will accrue mostly to the benefit of his two sons, who at present have no equity in the business.

(ii) The effective date of the transfer is to be July 31, 1980.

Required

(11) (a) Present a schedule showing the **minimum** deemed proceeds of disposition of **each property** to Mr. M (which will also be the corporation's cost of that property) as required by S.85(1) of the Act.

(14) (b) Determine any amount to be included in Mr. M's income for the 1980 taxation year by virtue of his approach to the transfer;i.e. using the minimum proceeds determined in part (a).

(7) (c) Determine the cost of the 1000 common shares to Mr. M.

(8) (d) Assuming that Mr. M insists on carrying out his plan, what change in the capital structure of the corporation would you recommend in order to avoid the potential problems revealed in your solution to parts (a) and (b) above? How would your recommendation affect the ACB of all shares taken back by Mr. M, as based on the new capital structure, assuming that he still wishes to receive the 1000 common shares, and that the non-share consideration will still consist of the $291,000 Note Payable?

Note:

You are to ignore any potential problems inherent in the new definition of paid up capital. That is, you are to assume that Mr. M is indifferent as to whether the ultimate disposition of his shares results in a deemed dividend or a capital gain.

8 Q. 3. **Suggested Time: 10 minutes**

Mr. Ripoff doesn't believe in paying income taxes. As president of his small Canadian-controlled private corporation located in Smalltown, he told his bookkeeper to expense $5,000 in corporate funds in respect of rent on his personal apartment, also located in Smalltown. He justified this on the grounds that the payments were for the purpose of earning income, since if he did not do business in Smalltown, he would be living in his own residence located in Fine City.

Required:

Explain to Mr. Ripoff the tax consequences to himself and his company that would result from his action.

18 Q. 4. **Suggested Time: 29 minutes**

Mr. K, a Canadian resident, owns 550 shares of Class A and 750 shares of Class B of non-resident corporation 'F'. The total issued share capital of 'F' is 2500 shares of Class A and 3750 shares of Class B. Mr. K. also owns 300 shares of Class A and 300 shares of Class B of another non-resident corporation 'M'. The total issued share capital of 'M' is 10,000 Class A shares and 3,750 Class B shares. Non-resident corporation 'F' owns 150 Class B shares of non-resident 'M'.

Required:

(15) (a) Determine the equity percentage of Mr. K in non-resident corporation 'M'.

(3) (b) Is non-resident 'M' a foreign affiliate of Mr. K? Explain.

PAGE 3 OF 4

19 **Q. 5. Suggested Time: 30 minutes**

In the world of corporate big business, an aggressive company will sometimes seek to achieve growth by adopting a policy of acquiring other, generally smaller companies. One of the reasons behind such a policy is that of diversification; another is to achieve a smoothing out of an otherwise unstable profit picture due to the ups and downs of the business cycle. A further, and often allied reason is that by acquiring a company with unapplied non-capital losses, the profitable purchaser may, by utilizing one of the reorganization tools in the Act, be able to use these losses to reduce profits otherwise subject to taxation.

Required:

In the three unrelated cases that follow, you are to decide whether the reorganization described will enable the non-capital losses to be utilized. You are to support your reasons by indicating the governing provisions of the Act. You are to assume that all transactions take place after March 31, 1977 and that the reorganization has a sound business purpose in addition to the loss utilization.

Case 1

(6) Conglomerate Ltd. purchased all of the shares of K Corporation in 1976. At that time, K Corporation had accumulated non-capital losses dating back from its 1973 fiscal year of $100,000. In June of 1977, K Corporation was wound up into the parent corporation. The fiscal year of both Conglomerate Ltd. and K Corporation ends on December 31st. Assuming that Conglomerate Ltd. would have sufficient income in its 1978 fiscal year, would it be able to deduct the $100,000 in determining its taxable income for that year?

Case 2

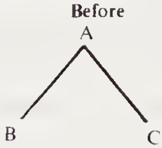
(6)

A controls B and C. B has accumulated non-capital losses which could be usefully employed in reducing the taxes on C's profitable operation.

If A causes B to amalgamate with C, may the new entity utilize B's losses? The new entity does not intend to carry on B's former loss business.

Case 3

Before



After

(7) Corporation A formerly controlled B and C. A then transferred at FMV its controlling interest in C to B. C has accumulated non-capital losses which it expects to be able to utilize against profits to be earned subsequent to the change in control. As part of the reorganization, C will discontinue the loss business and put all of its resources into other profitable operations. May C utilize its losses of prior years, assuming they would otherwise qualify?

100

END OF EXAMINATION

CANADIAN CERTIFIED GENERAL ACCOUNTANTS' ASSOCIATION
ADVANCED TAXATION 509 EXAMINATION
MARCH, 1980
EXAMINER'S COMMENTS

General

Although the results of the March 1980 examination did not bring the results hoped for, there was a distinct improvement in the willingness of the students to go direct to the Income Tax Act rather than the Master Tax Guide for the solutions to the questions. This improvement, if maintained, should as intended by the course in Advanced Taxation, produce graduates who should be able to cope with a good number of the problems they will meet within the real world without almost total reliance on supporting material which, in any event, is not intended to solve each and every tax problem and its attendant set of circumstances.

Specific

Q.1 Common errors made by those who did not do so well in this question were:

(i) Merely referring to s.204.1 and s.146(8.2) without actually calculating the tax consequences thereof.

(ii) Missing the application of s.204.1 and/or s.146(8.2) when answering the question.

(iii) Incorrect calculations of the 'excess' amount and the penalty tax under s.204.1.

Q.2 Considering the coverage given to this topic in both #409 and #509 tax courses, the results of this question were very poor indeed. The average mark achieved was 17 marks out of a possible 40 marks. Most common errors and omissions were:

(i) Ignoring effect of s.85(1)(e.2) in part (a) of question.

(ii) Making a lump-sum adjustment under s.85(1)(e.2) instead of applying this provision to *each* property when determining deemed proceeds of disposition.

(iii) Did not determine the amount to be included in Mr. M's income with respect to *each* property, as required by part (b) of question.

(iv) Deducting capital loss on A/C Receivable from Mr. M's income instead of applying this loss to ACB of common shares taken back by Mr. B.

(v) General lack of common sense approach to the problem; i.e., if a student ignored the effect of s.85(1)(e.2) in answering part (a), he would, in effect, have been faced with the fact that no income would have been attributed to Mr. M when answering part (b). In view of the fact that 14 marks were given to part (b), one would have thought that this would have made the student question his answer to part (a).

Q.3 This question was considered a gift by the Examiner. It was amazing how many refused to take it. Most common two errors were:

(i) In considering the rental expense as a benefit taxable in Mr. Ripoff's income under s.6(1)(a) or (b).

(ii) Thinking that s.18(1)(h) was applicable in denying the deduction of the rent expense to the corporation, rather than using s.18(1)(a).

Q.4 It was very gratifying to note how many did well in this question. Perfect scores were not uncommon. The main problem areas of those who did not do so well were:

(i) Adding Mr. K's ownership (i.e., his percentage) of Class A and B shares when determining his direct equity percentage instead of taking the greater of these two values.

(ii) Merely adding Class A and B shares together.

(iii) Calculating percentages incorrectly, especially when determining Mr. K's indirect interest in M via F corporation.

Q.5 The students performed quite well in this question, but considering the coverage given to this topic in the Lesson Notes, there is much room for improvement. Common errors and omissions were:

(i) Assuming that Conglomerate was not carrying on the loss business of K corporation and was therefore ineligible to deduct K's losses in 1978. The question gave no reason to believe that this assumption was warranted. However, if the student's answer was otherwise supported by correct references to the Act, full marks for this part of the question were awarded.

(ii) A general unawareness of the provisions of s.256(7)(a) and (b) and s.251(2) in deciding whether control had or had not changed, when answering Cases 2 and 3.

(iii) Quite a number of students assumed that s.87(2.1) was the provision that permitted an amalgamated entity to deduct non-capital losses of one or more predecessor corporations. However, s.87(2.1) merely tells us that the new corporation inherits such losses, and nothing more.

(iv) Many were tripped in Case #3, mainly because they did not consult the relevant provisions of the Act. The students should note *most carefully* that a *right* answer that is unsupported by references to the Act will gain them little more than half marks, whereas a *wrong* answer that is due only to a mis-reading of the *correct* references to the Act will gain the student at least as many.

CANADIAN CERTIFIED GENERAL ACCOUNTANTS' ASSOCIATION

ADVANCED TAXATION 509 EXAMINATION

MARCH, 1980

SUGGESTED SOLUTIONS

Marks **Time: 3 Hours**

15 Q. 1. (a) **Calculation of Excess Amount — S.204.2**

	Total contributions made		$10,000
(6)	Less: Greater of:		
	(i) Amounts deductible in respect of 1977 & 1978	$7,000	
	(ii)	$5,500	7,000
	Excess Amount		$ 3,000

(b) Mr. G. should be advised to have the trustees refund $1500 from each plan before the end of August 1979.

Minimum tax consequences would be:

Penalty tax — S.204.1

(6) Since a total of $7,000 was properly deductible as premiums paid in respect of Mr. G's 1977 and 1978 taxation years, the excess payment arose in November 1978. From November 1978 until the refund of $3,000 made in August 1979 is nine full months. Therefore, the penalty tax would be:

1%(3,000) x 9 = $270

Of this amount, it would seem that the penalty tax for November and December 1978 of $60 would be payable in respect of Mr. G's 1978 taxation year.

Amount to be included in Mr. G's income for 1979 — S.146(8)

	Excess amount refunded		$3,000
	Less: Amount deductible under S.146(8.2)		
	Lesser of:		
(3)	(i) Amount contributed in 1978	$10,000	
	Less: Amount deductible against 1977 income	4,000	
		6,000	
	(ii)	$ 5,500	
	Lesser amount =	$ 5,500	
	Exceeds:		
	Amount deductible against 1978 income	3,000	2,500
	Amount to be included in Mr. G's income for 1979 with no offsetting deduction		$ 500
	Tax at 18% thereon		$ 90

Minimum tax payable in 1979 by virtue of the excess amount would therefore be penalty tax of $210 plus the income tax of $90 = $300.

PAGE 1 OF 5

40 Q. 2. (a) Since Mr. M's two sons will receive the benefit of two-thirds of the assets transferred to the corporation, the agreed amounts (and minimum deemed proceeds) must be determined under S.85(1)(e.2) as follows:

	Asset	Elected Amount	Deemed Proceeds
	Inventory	$30,000	
	Plus 2/3(45,000 — 30,000)	10,000	$ 40,000
	Accounts Receivable	$40,000	38,000 (1)
	Equipment	$60,000	
	Plus 2/3(81,000 — 60,000)	14,000	74,000
	Building	$92,000	
(11)	Plus 2/3(161,000 — 92,000)	46,000	138,000
	Land	$70,000	
	Plus 2/3(100,000 — 70,000)	20,000	90,000
	Goodwill	—	
	Plus 2/3(96,000 — nil)	64,000	64,000 (2)

(1) Since the FMV of the accounts receivable is less than the elected amount, S.85(1)(c) restricts the elected amount to that FMV. Mr. M thus has a capital loss of $2,000, which will increase the ACB of consideration taken by him in the form of shares of the capital stock of the corporation pursuant to S.85(4).

(2) Even though Mr. M did not elect to transfer the goodwill to the corporation, S.85(1)(e.2) will still apply to transfer an amount that would be proportionate to the benefit received by Mr. M's two sons.

(b) **Amounts to be included in Mr. M's income**

		Deemed Proceeds	Mr. M's cost	Income Amount
	Inventory	$ 40,000	$30,000	$10,000
	Equipment	74,000	60,000	14,000 (1)
	Building	138,000	92,000	38,000 (2)
	Land	90,000	70,000	10,000 (3)
	Goodwill	64,000	—	25,600 (4)
(14)				$97,600

(1) Recapture amount — S.13(1).

(2) Recapture amount — S.13(1). There is no capital gain, since Itar 20(1)(a) deemed proceeds are equal to the capital cost of the building.

(3) Taxable capital gain.

(4) Itar 21(1) deemed proceeds are 80%(64,000) = $51,200. S.14(1) amount as determined under S.14(5)(a) is $25,600.

(c) **Cost of common shares to Mr. M**

(7)	Elected amount	$292,000
	Less: Note Payable	291,000
		1,000
	Add: S.85(4) amount	2,000
	ACB of common shares	$ 3,000

Note: S.85(1)(e.2) specifically prevents the excess of deemed proceeds over the elected amount from being added to the ACB of the common shares.

(d) If Mr. M insists on issuing 1000 common shares to each of his two sons, he may effectively block the penalizing provisions of S.85(1)(e.2) by having the corporation issue redeemable preferred shares (which must be redeemable at the option of the shareholder) with a par value equal to the difference between the FMV of the assets transferred to the corporation and the value of the note payable plus the issue price of the common shares, i.e.:

(2)			
	FMV of Assets		$521,000
	Less: Note payable	$291,000	
	Issue price of common	1,000	292,000
	Par value of preferred shares		$229,000

ACB of Preferred

S.85(1)(g) amount:

	Lesser of: (i) FMV of preferred shares	$229,000
	(ii) Proceeds of disposition	$292,000
	Less: Note payable	291,000
		$ 1,000
(3)	Lesser amount = Cost of preferred	$ 1,000
	Add: S.85(4) amount	
	$\frac{229,000}{230,000} \times 2000$	1,991
	ACB of preferred	$ 2,991

ACB of Common

S.85(1)(h) amount:

	Proceeds of disposition			$292,000
	Less: Note payable	$291,000		
	+ Cost of preferred	1,000		292,000
(3)	Cost of common	=		nil
	Add: S.85(4) amount			
	$\frac{1,000}{230,000} \times 2000$		=	9
	ACB of common		=	$ 9

NOTE TO MARKER: If part (d) is answered well, bonus marks may be awarded.

8 Q. 3. (4) (i) The \$5,000 would be taxable in Mr. Ripoff's hands under S.15(1) as an appropriation of funds. It is quite likely that a penalty under S.163(2) would also be levied.

(4) (ii) The corporation would have the \$5,000 added back to its income pursuant to S.18(1)(a). A penalty under S.163(2) is also a distinct possibility.

Note: Not more than 1 mark should be deducted if the student omits to mention the possibility of a penalty under either (i) or (ii) or both (i) and (ii).

18 Q. 4. (a) The first step is to determine Mr. K.'s direct equity percentage in 'M' per S.95(4) (a).

Proportionate share ownership in class A is: $\frac{300}{10,000} \times 100 = \underline{\underline{3\%}}$

Proportionate share ownership in class B is: $\frac{300}{3,750} \times 100 = \underline{\underline{8\%}}$

(5) Therefore, the direct equity percentage of Mr. K in 'M' is 8%, this being the greater of the two values.

The second step is to determine Mr. K's equity percentage in 'M' per S.95(4)(b), it being the total of:

Mr. K's direct equity percentage in 'M' of: $\underline{\underline{8\%}}$

plus,

Mr. K's equity percentage in 'F' times 'F's' direct equity percentage in 'M', calculated as follows:

Mr. K's equity percentage in 'F'

Direct equity percentage

Proportionate share ownership in class A is: $\frac{550}{2,500} \times 100 = \underline{\underline{22\%}}$

(10) Proportionate share ownership in class B is: $\frac{750}{3,750} \times 100 = \underline{\underline{20\%}}$

Therefore direct equity percentage in 'F' is 22%. This value is also Mr. K's equity percentage in 'F'.

Corporation 'F's' direct equity percentage in 'M' is:

$$\frac{150}{3,750} \times 100 = \underline{\underline{4\%}}$$

Thus, Mr. K's indirect equity in 'M' is 22% x 4% $= \underline{\underline{.88\%}}$

Therefore, Mr. K's equity percentage in 'M' is the total of 8% + .88% = 8.88%.

(3) (b) No, non-resident corporation 'M' is not a foreign affiliate of Mr. K, because his equity percentage therein is less than 10% (cf. S.95(1)(d)).

19 Q. 5. **Case 1**

(6) Conglomerate would be able to utilize the prior years' losses of K Corporation in its 1978 fiscal year. Since the fiscal year ends of both companies are the same, the subsidiary's loss for a particular taxation year is deemed to be the parent's loss for that same year. Because the losses of the subsidiary can only be used by the parent for its first fiscal year commencing **after** the commencement of the winding up of the subsidiary, these losses will become available for the parent's fiscal year beginning January 1, 1978. See S.88 (1.1).

Case 2

(6) A will control the new entity following the amalgamation. Since A also controlled both predecessor corporations prior to amalgamation, S.256(7)(b) will not apply to deem control to have taken place immediately before the amalgamation. Thus, S.111(5) also does not apply, and the new entity will be able to utilize the prior years' losses of B even though B's former business will not be carried on.

Case 3

(7) Control is deemed not to have been acquired under S.256(7)(a)(i) if the new controlling corporation was related to the corporation whose shares it acquired. We must therefore look to the provisions of the Act in which relationship is defined. Under S.251(2)(c)(i), any two corporations are related if they are controlled by the same person or group of persons. Since B and C were both controlled by A, then immediately before the acquisition of C's shares by B, both B and C were related to one another. Therefore, S.256(7)(a)(i) applies, and C will be able to deduct its prior years' losses against future profits within the limitations of S.111(1)(a). The fact that C will not be carrying on its former loss business is irrelevant.

100

END OF SOLUTIONS

CANADIAN CERTIFIED GENERAL ACCOUNTANTS' ASSOCIATION

ADVANCED TAXATION 509 EXAMINATION

JUNE 1980

Marks

Time: 3 Hours

Notes:

1. This examination is based on the 50th edition of the INCOME TAX ACT as it stood on **July 15, 1978**. Please write down the date and edition of the I.T.A. that you are using and any subsequent amendments on which you based your study for this examination on the inside cover of your examination booklet.
2. To obtain full marks to a question, you should reference your answers to the applicable provision/s in the I.T.A. If a reference to one or more sections in the main body of the Act and to the ITAR provisions is required, the applicable reference should be given with the relevant part of your solution.
3. You should try to keep within the suggested time given when answering a particular question, since exceeding the time limit may affect your overall performance.
4. Round all calculations to the nearest dollar.

10 Q. 1. **Suggested Time: 18 minutes**

PVC Corporation Ltd., a Canadian-controlled private corporation, operates a very successful business of manufacturing all components for underground irrigation systems, which it markets in British Columbia and Alberta. The company wishes to expand its activities to other provinces in Canada, but lacks the necessary capital to do so. The most natural solution would be for the company to go public. Preliminary research in this area has indicated that the market would be very receptive to a share offering by PVC, and the company intends to accomplish its objective by January 1, 1980. Another factor in the company's decision to go public was that it had already outgrown the small business incentive under S.125 of the Act.

You have reviewed the company's financial situation up to September 30, 1979, its fiscal year-end, and have determined the following:

(i) Net income for the year ended September 30, 1979 was $495,000.

(ii) The cumulative deduction account as at September 30, 1978 was $960,000.

(iii) Included in the net income figure was $27,500 in dividends received from taxable Canadian corporations during the period February 7th to September 10, 1979. (PVC Corporation owned no greater than 4% of the shareholdings in any one of the payor corporations.)

(iv) RDTOH as at September 30, 1978 was $45,000, and the Cap.D.A. stood at $98,000 at the same date.

(v) You have also determined from discussions with the chief accountant that PVC has earned $24,000 in investment income up to the date of your review. Included therein is a taxable capital gain of $10,000.

The date of your review was November 25, 1979.

Required:

(4) (a) Explain the tax consequences of going public that would be relevant to PVC's situation.

(6) (b) What steps should PVC take before it attains status as a public corporation? Be specific in your recommendations, and show any necessary calculations. You may assume that the short fiscal period of October 1 - December 31, 1979 will not present any problem with respect to your recommendations.

37 Q. 2. **Suggested Time: 67 minutes**

Mr. Y has operated a successful delicatessen business since July 1967 and now wishes to transfer the assets of his proprietorship to a corporation to be controlled by him without any tax consequences either to himself or to the corporation. The effective date of the transfer is to be July 1, 1980. He presents to you the amounts which he is considering using, as shown in the following schedule:

	Tax Cost to Mr. Y	Elected Amount per Mr. Y	Note Payable taken back by Mr. Y	FMV of Properties as at May 30, 1980
Accounts Rec.	$ 30,000	$ 30,000	$ 30,000	$ 27,500
Inventory	55,000	50,000	48,000	65,000
Equipment (Note 1)	70,000 (UCC)	65,000	60,000	72,500
Building (Note 2)	121,000 (UCC)	125,000	125,000	250,000
Land	40,000	40,000	100,000	100,000
Goodwill (Note 3)	15,000 (CEC)	80,000	80,000	100,000
	$331,000	$390,000	$443,000	$615,000

Note 1 Capital cost of equipment was $95,000; FMV on V-Day N/A.

Note 2 Capital cost of building was $200,000; FMV on V-Day was $210,000.

Note 3 The goodwill was purchased in 1974 for $45,000.

Other Information

Mr. Y wishes to receive 100 common shares from the corporation in addition to the note payable.

Required:

(a) Assuming Mr. Y's elected amounts were used:

(10½) (i) Determine Mr. Y's proceeds of disposition and the cost to the corporation in respect of each property. Explain any apparent exception to the S.85 rules that may arise in your solution.

(13) (ii) Determine the tax consequences, if any, to Mr. Y arising from the transfer amounts per (i) above in respect of each property.

(b)

(10½) (i) Present a schedule showing the amounts that should be used if Mr. Y wishes to effect a tax-free transfer of the properties. Again, explain any exception to the S.85 rules as used by you. The non-share consideration in the form of the note payable in respect of each property should be equal to the correct elected amount for that property except for goodwill, in which case the amount of the note payable should be $2,500 less than the elected amount.

(3) (ii) What would be Mr. Y's ACB of all of the common shares as a result of using the transfer amount in (b)(i), assuming that he took back a note payable from the corporation as determined by you in your answer to (b)(i)?

12 Q. 3. **Suggested Time: 22 minutes**

In its 1979 taxation year ended December 31, 1979, the ABC Partnership earned $105,000 in net income, made up as follows:

Income from appliance dealership	$108,000
Income from bonds and debentures	12,000
Dividends received from taxable Canadian corporations (actual amount)	15,000
Loss sustained in farming operation	(30,000)
Partnership net income	$105,000

Other Information

1. The partnership agreement stipulates that Partner A is to receive a salary of $15,000 as a first charge against profits from the appliance dealership in recognition of the major contribution in time and money that he made in the initial years of the business. All remaining income and losses are to be divided equally between the partners.
2. The farming business had been profitable in previous years. In 1979, however, adverse weather conditions resulted in a major crop loss. Partners B and C spent most of the time needed to run the business; Partner A's involvement was limited due to his preoccupation with the appliance dealership.
3. Partners B and C also operated small farmholdings of their own. When taken in total, their respective activities in farming constituted a chief source of income to them. Both B and C suffered losses in their respective operations for the same reason as mentioned above. B's loss was $8,500, and that of C's was $6,200.
4. The partners had no other income other than detailed above.
5. The ACB's of the partnership interests as at December 31, 1978 were:

Partner A	$150,000
Partner B	$120,000
Partner C	$105,000

Drawings taken during the 1979 fiscal period were:

Partner A	$ 55,000
Partner B	$ 42,000
Partner C	$ 39,000

Required:

(8) (a) Determine the net income of each partner for accounting and tax purposes for the taxation year ended December 31, 1979.

(4) (b) Determine the ACB of each partner's interest in the partnership as at December 31, 1979.

Your answers should be in good form and illustrate the source concept of income.

18 Q. 4. **Suggested Time: 32 minutes**

Mr. Successful has operated his dry cleaning business continuously since January 1, 1972. In August 1979, he received a tempting offer to sell the business. The amounts agreed on between Mr. Successful and the prospective buyer in respect of the business assets were as follows:

	Purchaser's Offer	Tax Cost to Mr. Successful
Land	$ 75,000	$ 25,000
Building	150,000	80,000 (UCC)
Equipment	60,000	55,000 (UCC)
Inventory of supplies	15,000	15,000
Goodwill	200,000	nil

The agreement in respect of the above amounts was contingent upon Mr. Successful agreeing to take back a mortgage (payable over 15 years by the purchaser) for all of the above-listed properties except the inventory of supplies, which will be paid for in cash at the time the agreement is closed. The mortgage would bear interest at 9½% and the payments thereon would be half-yearly.

Before accepting the offer, Mr. Successful has come to you for advice. He was concerned that his personal rate of tax (50% effective) would take away half of his gain at one stroke. He would like to defer taxes as much as possible until later years, at which time he expected that his effective rate would drop to about 30%. It was for this reason that the mortgage appealed to him, since he had been informed that a reserve could be taken in respect of the profit element in an amount receivable.

You have also determined that the interest rate on the mortgage to be taken back by him is only one percentage point below the borrowing rate available from banks and trust companies at that time. The purchaser wants to close the deal by October 1, 1979 at the latest. The capital cost of the equipment was $75,000; that of the building was $120,000.

Required:

(12) (a) Assuming that the first payment on the mortgage would not be due until March 31, 1980, advise Mr. Successful of the maximum reserve that would be available to him in respect of his taxation year ending on December 31, 1979, **after** you have determined the amount to be included in his income for that year with respect to the sale of the business before the application of the reserve.

(6) (b) What specific problem is revealed in your solution to part (a)? In this regard, you are to assume that Mr. Successful's cash resources after the sale would be limited to the $15,000 received for the inventory of supplies.

What solution would you recommend to the problem?

23 Q. 5. **Suggested Time: 41 minutes**

X Ltd., a private corporation resident in Canada owns all of the issued shares of three Canadian-controlled private corporations, A Ltd., B Ltd. and Y Ltd. A Ltd. and B Ltd. conduct active businesses and qualify for the SBD, while Y Ltd. earns all of its revenue from investments. Apart from holding the shares of these companies, X Ltd. fulfills no useful function, and the four shareholders of X Ltd. (all individuals), decided to wind up the company notwithstanding the fact that the dividends received by it from A Ltd., B Ltd. and Y Ltd. were deductible in computing its taxable income. If the net assets of X Ltd. were distributed now, the tax consequences of the deemed dividend that would arise as a result of the transfer of the shares in the three companies at FMV would not be too onerous, since the existence of 1971 CSOH (which would in effect, result in a capital gain to the shareholders of X Ltd. upon redemption for cancellation of their shares) and a Cap.D.A. in X Ltd. would to a great degree, absorb the deemed dividend.

A Ltd. operates a profitable business, while B Ltd. has accumulated sizable non-capital losses over the past three years. Y Ltd. has accumulated net-capital losses which it expects to be able to offset against taxable capital gains over the next three years. Net investment income of Y Ltd. has averaged $54,000 annually. Of this amount, $36,000 has been flowed through to X Ltd. and then out to the shareholders of X Ltd. in the form of taxable dividends. In a similar manner, A Ltd. flowed through $20,000 annually to the four shareholders. These dividends when combined with a salary that the shareholders drew from A Ltd. put them into an effective tax bracket of approximately 35%.

The four shareholders had consulted with their accountant who, after discussing the overall situation with them, came up with the following plan of corporate reorganization, which would begin in December, 1979 and be completed by March 31, 1980.

Step 1 Amalgamate A Ltd. and B Ltd. to form a new corporation, AB Ltd. Following the amalgamation, the cumulative deduction account of AB Ltd. would be $600,000.

Step 2 X Ltd. will acquire the shares of AB Ltd. in exchange for the shares of the predecessor corporations in accordance with S.87(4) of the Act.

Step 3 X Ltd. will transfer the shares of Y Ltd. to AB Ltd. in accordance with S.85 of the Act. The sole consideration taken back by X Ltd. will be additional shares to be issued by AB Ltd.

Step 4 X Ltd. will then pay off all outstanding liabilities, following which the shareholders of X Ltd. will cause the company to be wound up under S.88(2) of the Act.

Continued....

The accountant also advised the shareholders not to draw any salaries from AB Ltd. for its first fiscal period following the amalgamation in order to maximize one of the main benefits of the reorganization, which is to offset the prior years' losses of B Ltd. against income of AB Ltd. The fiscal year end of AB Ltd. is to be December 31st, as will be that of Y Ltd. The accountant stated that by following this approach, any taxes that the four shareholders might be liable for as a result of the deemed dividend following the wind-up of X Ltd. would be minimized due to the beneficial effects of the Cap.D.A. and also the dividend tax credit on the taxable portion of the deemed dividend. Also, AB Ltd. would be able to use up most, if not all of former B Ltd.'s losses even though AB's first fiscal period would consist of nine months only. The accountant also recommended that no dividends should be paid by AB Ltd. in the year of the wind-up of X Ltd.

Both AB Ltd. and Y Ltd. would be operating in British Columbia exclusively. Therefore, the effective federal/provincial tax rates would be 27% and 51%, respectively.

Required:

(a)

(7) (i) Will the accountant's reorganization plan enable the new AB company to apply the non-capital losses of predecessor B company against income of AB Ltd. to be earned in its first fiscal period following the amalgamation as well as subsequent years, if necessary? AB Ltd. will not be continuing the loss business.

(7) (ii) Will Y Ltd. be able to apply its outstanding net capital losses against the taxable capital gains expected to be realized after the reorganization?

NOTE: In IT-302, the Department views 'control' to include 'indirect' as well as 'direct' control over a particular corporation.

(9) (b) Is there any flaw in the above corporate reorganization? If so, please explain in **detail** and recommend corrective treatment.

You should support your answers with specific references to the applicable provisions of the Act. Failure to do so will lose you marks.

100

END OF EXAMINATION

CANADIAN CERTIFIED GENERAL ACCOUNTANTS' ASSOCIATION
ADVANCED TAXATION 509 EXAMINATION
JUNE, 1980
EXAMINER'S COMMENTS

General

A major fault appeared to be the lack of a proper reading of a particular question before it was answered.

Specific

Q.1 Most students obtained more than 50% on the question; those who did not, simply had little knowledge of the topic.

Q.2 A straightforward application requiring a demonstration of the rules contained in s.85 of the Act. The only unusual feature of the question was to ask the student to identify any apparent exception to the s.85 rules (which was the application of the ltar rules with respect to the disposition of goodwill). Most of the students did not realize what was wanted and ignored this part of the question altogether. I think the prime reason why students do so badly in s.85 questions is that they are not able to understand the language of the Act well enough to enable them to solve a specific question. In this regard, study of exams of prior years will not help them much. There is no substitute for a willingness to tackle the Act itself when solving their assignment questions, and this in my view, is the best preparation they could have for any examination in taxation.

Q.3 An easy question on partnerships. However, in spite of very clear directions as to the source concept of income, accounting income and income for tax purposes, a good number of students still answered to the contrary. Some lumped the income items together and divided by three to arrive at the income of a particular partner; others presented income for tax purposes only, while more than a few did both.

Q.4 Not a difficult question but it required a little imagination. It was surprising how many missed the point about Mr. Successful borrowing the funds in order to purchase the IAAC even though I virtually told them to do it in the question itself.

Q.5 The difficulty of this question lay more in the reading of it than in the actual answer. Very few were able to identify the crucial section relating to 'change in control', with the result that they either took pot luck at it (i.e., control does change or does not change) without any supporting argument or references, or they tried to bluff their way out of it. Unfortunately, the contents of the Act do not lend themselves to either approach.

CANADIAN CERTIFIED GENERAL ACCOUNTANTS' ASSOCIATION

ADVANCED TAXATION 509 EXAMINATION

JUNE, 1980

SUGGESTED SOLUTIONS

Marks | Time: 3 Hours

10 Q. 1. (4) (a) Upon attaining status as a public corporation on January 1, 1980, PVC Corporation will lose its ability to obtain a dividend refund to the extent of its RDTOH as at December 31, 1979. Thus, it will not be able to recover past and current Part I taxes as represented by the RDTOH. S.129(1) dictates that in order to qualify for a dividend refund, PVC must have been a private corporation at the end of a particular taxation year in which it claims the lesser of ¼ of all taxable dividends paid in that year and its RDTOH at the end of that year.

In addition, if the Cap.D/A. is not elected on before PVC becomes a public corporation, it cannot be paid to PVC's shareholders as a tax-free dividend after the company has gone public. It is lost forever. S.89(1)(b); S.83(2).

(6) (b) PVC should pay out sufficient taxable dividends before December 31, 1979 in order to recover RDTOH as at December 31, 1979. Similarly, it should proceed with an election under S.83(2) to pay out the Cap.D/A before that time. The relevant amounts would be:

RDTOH	
Balance as at September 30, 1978	$ 45,000
Add:	
Part IV tax on dividends 25% (27,500)	6,875
Addition during October 1 - November 25	
2/3 x 25% x 24,000	4,000
Balance as at November 25, 1979	$ 55,875
Cap.D/A	
Balance as at September 30, 1978	$ 98,000
Add: Non-taxable portion of capital gain	10,000
Balance as at November 25, 1979	$108,000

37 Q. 2. (a) (i)

Marks		Deemed Proceeds to Mr. Y and cost to corporation*	
(1½)	Accounts receivable	$ 27,500	S.85(1)(c)
(1½)	Inventory	55,000	S.85(1)(c.1)
(1½)	Equipment	70,000	S.85(1)(e)
(1½)	Building	125,000	S.85(1)(a)
(1½)	Land	100,000	S.85(1)(b)
(3)	Goodwill	80,000*	S.85(1)(a)

*The elected amount in respect of goodwill must be modified by Itars 21(1) & 21(2). The deemed proceeds to Mr. Y and the cost to the corporation will thus become .8(80,000) = $64,000.

Note re marking: When marking the goodwill item, 1½ marks should be allotted to a correct deemed proceeds and cost per S.85, and the other 1½ marks to the Itar modification.

(ii) **Tax consequence to Mr. Y**

	Accounts Receivable	
	Tax cost to Mr. Y	$30,000
(2)	Deemed proceeds	27,500
	Capital loss	$ 2,500*

*Must be added to cost of common shares per S.85(4).

(2) Since the consideration to be received by Mr. Y of $30,000 is greater than the deemed proceeds of $27,500, Mr. Y would be subject to the tax consequences of S.15(1) in the amount of $2,500.

(1) **Inventory** Since the deemed proceeds equals the tax cost, Mr. Y is prevented from claiming a loss of $5,000.

(1) **Equipment** Since the deemed proceeds equals the tax cost, Mr. Y is prevented from claiming a terminal loss of $5,000.

	Building		
(2)	Deemed proceeds	$125,000	
	UCC	121,000	
	Recapture of CCA	$ 4,000	
	Land		
(2)	Deemed proceeds	$100,000	
	Tax cost to Mr. Y	40,000	
	Capital gain	$ 60,000	
	Taxable capital gain	$ 30,000	
	Goodwill		
	Deemed proceeds — 80%(80,000)	$ 64,000	Itar 21(1)
(3)	S.14(1) amount as determined under S.14(5)(a) =	32,000	
	Less: CEC	15,000	
	Amount to be included in Mr. Y's income	$ 17,000	

(b) (i)

		Tax Cost to Mr. Y	Elected Amount	Note Payable taken back by Mr. Y
(1½)	Accounts Receivable	$ 30,000	$ 27,500	$ 27,500
(1½)	Inventory	55,000	55,000	55,000
(1½)	Equipment	70,000 (UCC)	70,000	70,000
(1½)	Building	121,000 (UCC)	121,000	121,000
(1½)	Land	40,000	40,000	40,000
(3)	Goodwill	15,000 (CEC)	37,500*	35,000
		$331,000	$351,000	$348,500

*In order to obtain a tax-free transfer of goodwill, the maximum amount that can be elected on is 30,000 ÷ .8 = $37,500. i.e. The deemed proceeds and cost under S.85 as modified by Itar 21(1) must not exceed two times the CEC to Mr. Y. The cost to the corporation will be modified by Itar 21(2). Thus, the eligible capital expenditure will become $30,000.

Note re marking of goodwill item: As long as the student demonstrates an understanding of the interplay between S.85 and the Itar provisions, he may be given full marks.

(ii) **ACB of all common shares to Mr. Y.**

(3)	Deemed Proceeds (elected amount)	$351,000
	Less: Note payable (consideration)	348,500
	Cost of common S.85(1)(h)	2,500
	Add: S.85(4) amount	2,500
		$ 5,000

12 Q. 3.

(a) **Determination of Net Income**

	Income (Loss) in respect of ABC Partnership	**Partner A**	**Partner B**	**Partner C**
	Salary to A	$ 15,000	$	$
	Balance of income from appliance dealership 1/3 (108,000 — 15,000)	31,000	31,000	31,000
	Income from bonds and debentures	4,000	4,000	4,000
	Dividends	5,000	5,000	5,000
	Loss incurred in farming operation	(10,000)	(10,000)	(10,000)
(4)	Accounting Income	45,000	30,000	30,000
	Add:			
(1)	Gross up re: taxable dividends	2,500	2,500	2,500
		47,500	32,500	32,500
(2)	Restricted farm loss in respect to partner A	5,000		
	Less:			
(1)	Farm (business) loss in respect of partners B and C		8,500	6,200
	Net income for tax purposes	$ 52,500	$ 24,000	$ 26,300

	(b) ACB of partnership interests as at December 31, 1978	$150,000	$120,000	$105,000
	Add			
	S.53(1)(e)			
	Income from appliance dealership	46,000	31,000	31,000
(2½)	Income from bonds and debentures	4,000	4,000	4,000
	Income from dividends	5,000	5,000	5,000
		205,000	160,000	145,000
	Deduct			
	S.53(2)(c)			
	Loss from farm operation	10,000	10,000	10,000
	Drawings for the year	55,000	42,000	39,000
(1½)		65,000	52,000	49,000
	ACB of partnership interests as at December 31, 1979	$140,000	$108,000	$ 96,000

18 Q. 4.

		Proceeds	Tax Cost	Amount to be included in Income
	(a) Land	$ 75,000	$ 25,000	$ 25,000
	Building	150,000	80,000	55,000(1)
(8)	Equipment	60,000	55,000	5,000(2)
	Goodwill	200,000	—	75,000(3)
		$485,000		$160,000

(1) Recapture amount = 120,000 — 80,000 = $ 40,000
Taxable capital gain =
½(150,000 — 120,000) 15,000
$ 55,000

(2) Recapture amount = 60,000 — 55,000 $ 5,000

(3) The business has been carried on continuously since January 1, 1972. Therefore, Itar 21(1) applies to deem the proceeds to be 75%(200,000) = $150,000. The amount actually included in income is $75,000 pursuant to S.14(1) and S.14(5)(a).

The maximum reserve allowable under S.40(1)(iii) would be:

$$\frac{225{,}000}{225{,}000} \times 80{,}000 = \$\ 80{,}000$$

(4) Allowable reserve = ½(80,000) = $ 40,000

Note: A reserve under S.40(1)(iii) is relevant only to the land and building. The Act does not provide for any reserve in respect to recapture of CCA or to an eligible capital amount taxable under S.14(1).

(b) In order to complete the deal, Mr. Successful will have to be satisfied with $15,000 in cash. The potential tax payable in respect of his 1979 taxation year would, however, be 50%(160,000 — 40,000) = $60,000.

(6) Since the recapture of CCA and the eligible capital amount both qualify under S.61, Mr. Successful could borrow the necessary funds at 10½% and purchase an IAAC to defer the tax consequences on these amounts. The interest on the mortgage receivable would more than offset the interest paid on the funds borrowed to purchase the IAAC. Since the mortgage reserve acts in a similar manner to defer the taxes otherwise payable on the sale of the business, Mr. Successful need not purchase an IAAC in respect of the taxable capital gain on the land and building. Interest paid on the funds borrowed to purchase the IAAC are deductible for tax purposes.

Note: If a student recommends the purchase of an IAAC on the entire gain from the sale of the business, this approach will be in order.

Note re marking
It is suggested that if a student includes recapture and/or the taxable goodwill amount in determining the allowable reserve, 2 marks should be deducted in respect of each error.

23 Q. 5. (a) (i) S.87(2.1) permits the flow-through of non-capital losses of predecessor corporations to the
new corporation. As long as S.111(5) does not apply to prevent the deduction of these losses,
AB Ltd. may use them to reduce its other income within the 5 year carry-forward limitation
(which will also include the year or years that the losses had been outstanding in B Ltd.'s
(7) hands). We must therefore look to the provisions that govern the meaning of a 'change of con-
trol of a corporation' with respect to the situation at hand. In this regard, S.256(7)(b) states
that control of a predecessor corporation will be deemed to have been acquired only in the
case where a person or group of related persons who controlled the new corporation immed-
iately after the amalgamation did not control a predecessor corporation immediately before
the amalgamation. Since former corporations A Ltd. and B Ltd. were controlled by X Ltd.
prior to the amalgamation, and the new AB company was controlled by X Ltd. following the
amalgamation, S.256(7)(b) does not apply to prevent AB Ltd. from deducting the non-capital
losses of former B Ltd. from its income. Since there is no change in control for purposes of
S.111(5), it matters not that the loss business will not be continued by AB Ltd.

Moreover, since the Department views control to mean also indirect control (which was effectively exercised by the four shareholders of X Ltd.), the transfer of the shares of AB Ltd. to them subsequent to the winding up of X Ltd. will not affect the ability of AB Ltd. to deduct the non-capital losses.

(ii) Since net capital losses expire upon a change of control taking place, we must again look to
the relevant provisions governing a change in control. S.256(7)(a)(iv) states that where shares
(7) of a particular corporation have been acquired by a corporation formed by an amalgamation,
that corporation shall be deemed not to have acquired control of the particular corporation if
the predecessor corporations were related to the particular corporation. Since former A Ltd.
and B Ltd. were related to Y Ltd. pursuant to S.251(2)(c), S.111(4) will not apply to prevent
Y Ltd. from deducting its net capital losses against taxable capital gains of future years by
virtue of S.256(7)(a)(iv).

(b) The accountant should not have transferred the shares of Y Ltd. from X Ltd. to AB Ltd. Since the CDA of AB Ltd. is $600,000, the CDA would, on the assumption of the payment of a taxable dividend of $36,000 by Y Ltd. in its 1980 taxation year (so that Y Ltd. may recover Part I tax by claiming a dividend refund of $9,000), be increased to $648,000 (i.e. $600,000 + 4/3(36,000)) as at December 31, 1980. Because the four shareholders would not be receiving any dividends from AB Ltd. in their 1980 taxation year, AB Ltd. would be limited to the low rate of tax on $102,000 rather
(9) than $150,000 in its 1981 taxation year.* In order to rejuvenate the CDA of AB Ltd. and to maximize the SBD for AB Ltd.'s 1982 taxation year, the shareholders would have to receive dividends in 1981 that would, in all probability, be greater than they desired.

If, on the other hand, Y Ltd. did not pay a taxable dividend to AB Ltd. in its 1980 taxation year, then it would be subject to the full rate of tax of 51%. By paying the dividend, it could decrease its tax rate to 34-1/3% (i.e. 51% - 2/3(25%)). Although this is not a great problem in itself (the tax could be recovered in subsequent years), it is generally undesirable for an operating company to receive dividends from an investment company, since this allows for less flexibility in the timing of the flow of corporate earnings to the individual shareholders from a corporate source. For example, it may be preferable in a particular year to pay taxable dividends exclusively from the operating company in order to maximize the SBD. If lost for a particular year, the SBD cannot be recovered; whereas RDTOH can be triggered off at any time as long as the investment company remains a private corporation.

Instead of transferring the shares to AB Ltd., they should be distributed to the four individual shareholders pursuant to S.88(2). Although this would result in a deemed dividend under S.84(2), the facts of the question indicate that the tax consequences would not be too onerous. In any event, the additional flexibility gained in planning the amount and source of income to the individual controlling shareholders would justify this approach. For the reason already mentioned above, the transfer of the shares of Y Ltd. to the shareholders from X Ltd. would not result in nullifying the net capital losses of Y Ltd. That is, the indirect control over Y Ltd. already exercised by them would merely be converted to direct control.

*It is assumed that AB Ltd. will not have any taxable income in its 1980 taxation year due to the utilization of the losses of B Ltd.

Note re marking

It is not expected that the students present such a comprehensive solution. If a good grasp of the topic is demonstrated along with the identification of the relevant provisions of the Act, the student may be given full marks.

100

END OF SOLUTIONS

CANADIAN CERTIFIED GENERAL ACCOUNTANTS' ASSOCIATION
ADVANCED ACCOUNTING 511 EXAMINATION
JANUARY, 1980

Marks — Time: 3 Hours

15 Q. 1. Accountants are quite used to depreciation calculations as allocations of the historical cost of an asset and this concept of depreciation is "enshrined" in income tax law (via Capital Cost Allowance). However, some authors of the readings assigned in this course do not agree with the generally accepted practice for depreciation.

Required:

List and briefly discuss the objections to GAAP depreciation by Arthur L. Thomas (as cited in Hendriksen) and Robert R. Sterling (in his article "Towards a Science of Accounting").

10 Q. 2. What is, in your opinion, the best way to account for the effects of inflation on assets and operations?
Defend/explain your stand.

10 Q. 3. The notion of segmentation is "at odds" with both the theory of consolidation and GAAP in North America. However, a recent (1979) **Handbook** release spells out in detail procedures for reporting segmented information.

Required:

Explain why there are these moves to require disclosure of segmented information.

15 Q. 4. A recent (1978) **Handbook** release on **leases** prescribed new procedures of accounting by both lessees and lessors.

Required:

Explain why the above release on lease accounting is of conceptual interest.

10 Q. 5. The accounting equation which is most often discussed is stated as follows: Assets = liabilities + owners' equity. The equation used in connection with fiduciary accounts is assets = accountability. Why is there a difference and what is the meaning of the difference?

15 Q. 6. The estate of Art Childs included the following items at the date of his death November 16:

(1) A.B. Co. Ltd. bonds, 4½%, due Dec. 31, 1973; par value \$50,000; appraised value as on Nov. 16, \$56,000; interest payable Jan. 1 and July 1.
(2) M.Y. Co. Ltd. common stock, 1,000 shares, dividend of \$3 declared Nov. 1, payable Dec. 1 to stockholders of record Nov. 15.
(3) M.Y. Co. Ltd. 6% cumulative preferred stock, 1,000 shares. (Dividends are paid semi annually on Mar. 5 and Sept. 15 and there are no dividends in arrears.)

Required:

The executor of the estate asks that you advise him as to which items constitute income and which principal of the estate.

10 Q. 7. Why is depreciation seldom recorded in fund accounting except for utilities and other self-supporting activities?

15 Q. 8. Coreco acquired a tract of land in 1980 at a total cost of $500,000. At that time the general price level stood at 80. On December 31, 1986, when the general price level was 140, Coreco had a firm offer for the land of $1,000,000. The offer was refused. On December 31, 1987, Coreco received another offer of $1,350,000 for the land; at this time the general price index was 180. The offer was accepted and the transaction was completed on January 2, 1988. Mr. Avis, president, asks you if he is correct in saying that he made a $350,000 profit during 1987. He explains that he realizes that the total appreciation covered a period of almost eight years, but he feels a strict average over the eight-year period ignores the fact that some evidence of market value existed one year previously.

Required:

Explain to Avis as completely as you can the situation as you understand it, including recognition of general price-level changes as well as replacement cost information. Indicate how your proposal is different from or in accord with generally accepted accounting practice.

100

END OF EXAMINATION

CANADIAN CERTIFIED GENERAL ACCOUNTANTS' ASSOCIATION
ADVANCED ACCOUNTING 511 EXAMINATION
JANUARY 1980
SUGGESTED SOLUTIONS

Marks | Time: 3 Hour

15 Q. 1. (Sources Sterling, Append. 1, Lesson 1, Hendriksen, Ch. 13, Lesson 5)

Sterling says of GAAP depreciation:

(5) (a) dep. expense magnitude depends on **subsequent events** (useful life, salvage value)
- whose estimate of future is best?
- how correct when estimates proven wrong?
- Sterling uses his weight as an example.

(5) (b) allocation is used as a substitute for measurement of the value
- we will not develop measurement techniques unless we attempt to

(5) (c) defining depreciation as a cost allocation, not asset decline, precludes testable, empirical measurement.

(5) (d) depreciation has no "theoretical import"; it has no usefulness or decision relevance
- "hage" example
- his challenge to show a decision-model where depreciation is relevant.

(5) Thomas agrees with (a) to (c) above by demonstrating that no allocation method can be demonstrated to be superior to others (discussed in Ch. 13 of Hendriksen)

Marks: Any combination of the above marks can earn 15

10 Q. 2. **A/c for inflation:**

any of three positions could be defended, with varying degrees of difficulty:

(a) **Easy:** argue for GPLA - fix scale errors

(b) **Good:** argue for GPLA/CV - fix scale errors + specific changes
- some correlation with inflation rates
- theoretically correct?

(c) **Hard:** CV only; or CV/GPLA
- Cdn. expos. draft proposes this?

Marking note:

(2) take a sensible position
(2) clear distinction on GPLA v. CV
(6) logical arguments

10 Q. 3. **Why segmentation?**

- move to multi-national conglomerates
- different risks in different countries
- different risks in different industries
- trend to more and more disclosure (EMH?)

15 Q. 4.

(5) (7) Leases which fulfill the criteria of a "**capital lease**" are of conceptual interest because the **Handbook** prescribes that we **abandon the legal entity concept** for an economic entity concept; i.e., the lessor must treat the asset as sold even though he still retains title and the lessee must treat the asset as purchased. Other concepts (fairness, asset measurement, matching, etc) may be discussed and will be awarded marks accordingly.

(3) **Operating lease treatment** is unchanged and of no new conceptual interest.

10 Q. 5.

(3) There is a difference in the two equations because in the **first case** accountants state that they are reporting on financial position. In the second case the report is strictly one of accountability. The
(5) fiduciary is responsible only for **maintaining and protecting** the assets. He is not responsible for the liabilities or claims against these assets until the courts authorize payment. At the time of payment he reduces the stock of assets and also his accountability is reduced. The fiduciary is not
(2) attempting to give any statement about **the financial position** of the estate. From his reports it is not possible to determine whether the liabilities exceed the value of the assets or what proportion they comprise. His reports merely reflect the value of the assets held by the fiduciary for which he is held accountable at that time.

15 Q. 6.

ART CHILDS ESTATE

(5) (1) A.B. Co. Ltd. 4½% bonds due December 31, 1973, at appraised value and interest accrued to November 16 constitute principal assets. Any interest earned and collected after November 16 constitutes income to the estate. The amount to be included in an inventory of principal assets at date of death would be:

Appraised value of goods	\$56,000.00
Accrued interest to Nov. 16 ($\$50{,}000 \times \frac{4.5}{6}$)	843.75

(5) (2) M.Y. Co. Ltd. common stock and dividend of \$3 per share declared payable to stockholders of record Nov. 15 would be considered as principal assets. Any dividends declared subsequently and before final settlement of the estate or distribution of the stock as a legacy would constitute income to the estate. The common stock of M.Y. Co. Ltd. would be included in the inventory of principal assets at market value as of Nov. 16. The dividend receivable would be listed as \$3,000.

(5) (3) The M.Y. Co. Ltd. 6% cumulative preferred stock would be included as part of the principal of the estate. No part of the dividend would be included as principal because it had not been declared payable as of the date of Child's death. Any subsequent declarations and payments of dividends would be treated as income of the estate until such time as the stock is distributed to the legatee or the estate is settled. In provinces where apportionment legislation exists (e.g., Ontario) credit will be given for accrual, as long as the student refers to the legislation.

10 Q. 7. Depreciation is seldom recorded in fund accounting because the primary emphasis is on cash
flow rather than income flow. In general, a given quantity of dollars are appropriated for a
(7) stated period. The administrator is responsible for spending these dollars and nothing more,
in accordance with the directives of the legislative body. Reports on the activity of the admin-
istrator are, therefore, in terms of appropriations and expenditures rather than revenue and
expenses. The exception is made for utility funds and other self-supporting types of funds
(3) because these funds are accounted for as though they were enterprises, incurring cost to produce
a product or service and in turn selling it to customers. In these cases depreciation becomes
important because income flows rather than cash flows are important.

15 Q. 8. In terms of December 31, 1987, dollars, the land which CORECO sold cost $1,125,000 ($500,000
× 180/80). This means that in terms of dollars of equal purchasing power, the total gain on the
(5) sale of the tract is $225,000. The offer which was made for the land one year ago, stated in terms
of December 31, 1987 dollars,was $1,285,714 ($1,000,000 × 180/140). The gain which resulted
(5) from holding the land for the year is thus **$64,286** in terms of the current purchasing power of the
dollar.

Using presently accepted accounting procedures, the gain to be recognized in 1987 is $850,000.
With the acquisition price restated in terms of current dollars, the total gain is $225,000. If we
isolate the change in market value of the land during the year, keeping the measuring unit
constant, the gain for the year is $64,286. Recognition of the gain of $225,000 is in accord with
(3) accepted accounting practice except that it **does not follow the assumption** that the purchasing
power of the dollar is stable. The recognition of the $64,286 as the gain for the year means that the
(2) stable monetary unit concept is abandoned and that the **realization convention is modified** to
accept evidence other than actual transaction data as the basis of recognizing gains.

100

END OF SOLUTIONS

Page 3 of 3

CANADIAN CERTIFIED GENERAL ACCOUNTANTS' ASSOCIATION
ADVANCED ACCOUNTING 511 EXAMINATION
MARCH 1980

Marks **Time: 3 Hours**

10 Q. 1. Hendriksen presents eight factors which should be considered for the development of sound accounting practice:

(1) A statement of postulates regarding the nature of the accounting entity and its environment.
(2) A statement of the basic objectives of financial accounting.
(3) An evaluation of the user's needs and his constraints regarding his ability to understand, interpret, and analyse the information presented to him.
(4) The selection of what should be reported. This should include a selection of the objects and activities of the entity or its environment and the specific attributes that are relevant to the objectives of accounting.
(5) An evaluation of the possible measurement and descriptive processes for communicating information regarding the firm and its environment.
(6) An evaluation of constraints regarding the measurement and description of the entity and its environment.
(7) The development of principles or general propositions that can be used as guidelines in the formulation of procedures and rules.
(8) The formulation of a structure and format for the gathering and processing of data and for summarizing and reporting the relevant information.

Required:

Using this theoretical framework, how does the formulation of GAAP in Canada fit?

15 Q. 2. On January 1, 1980, Mary started up a machine rental business by investing $1000 and borrowing $500. She then purchased a machine for $1000 cash, which had a useful life of 5 years (i.e., depreciate at 20%). As at January 1, 1980, her Balance Sheet would therefore look like:

Cash	$ 500
Machine	1000
	$1500
Loan payable	$ 500
Owners' equity	1000
	$1500

Assume:

(i) The 1980 general price level indices were:

Jan. 1	100
Dec. 31	110

(ii) The machine was rented out Jan. 2 for $400 for the year.

(iii) The income tax rate is 50%.

(iv) The 10% rate of inflation was even throughout the year.

(v) Rentals were received evenly throughout the year.

(vi) Taxes were paid Dec. 31, 1980.

Required:

Present the Income Statement for 1980 and Balance Sheet as at December 31, 1980, stated in December 31, 1980 dollars (i.e., present general price-level restated financial statements).

Page 1 of 2

15 Q. 3. The recent **Handbook** release on Research and Development Costs (Sec. 3450, 1978) prescribes that research costs must be expensed and that deferral of development costs is allowed only under certain specific conditions.

Required:

Discuss the conceptual considerations of requiring that almost all R. and D. costs be expensed.

15 Q. 4. Discuss the concept of whether corporate income tax is an expense, ...or what? Include the accounting treatment implied by the expense and other views of income tax.

10 Q. 5. If the trust corpus includes as an investment, bonds which were acquired at a value above or below maturity value, how should the adjustment to maturity value be treated?

10 Q. 6. Are depreciation calculations ever important in fund accounting in areas other than self-supporting activities?

25 Q. 7. The comptroller of Tsoe Ltd. asks you to come to a board of directors meeting to explain some accounting problems to the members of the board. He indicates that the questions will be concerned with the problems of depreciation and inventories. As the auditor of the firm, you are fully aware that the corporation has used the straight-line method of depreciation for many years and that they have consistently used the lower of FIFO cost or market value in accounting for the inventory.

At the board meeting the following questions are raised:

(5) (1) What is the objective of calculating depreciation based on replacement cost and of determining the cost of the inventory and cost of goods sold in accordance with the principles of the LIFO method?

(6) (2) Are there some accounting assumptions or conventions which are responsible for the development of these methods?

(6) (3) What effect would the adoption of the methods have on the financial statements?

(8) (4) What are the pros and cons of modifying financial statements for changes in the level of prices?

Required:

Answer all the above questions.

100

END OF EXAMINATION

CANADIAN CERTIFIED GENERAL ACCOUNTANTS' ASSOCIATION
ADVANCED ACCOUNTING 511 EXAMINATION
MARCH, 1980
EXAMINER'S COMMENTS

Specific

Q.1 The candidates did not discuss Hendriksen and his views regarding the 8 factors. They believed that all 8 factors were incorporated in GAAP and were explicity adopted by the CICA.

Q.2 The candidates did not know the difference between monetary and non-monetary balance sheet items. They used the term 'holding gain (loss)' when referring to monetary gains or losses. On both of these points, the candidates seem to have confused GPL adjusted and CV statements.

Q.3 The candidates did not know the meaning of 'conceptual'. They also discussed current practice and not the arguments behind different views of capitalizing versus expensing R and D costs. Although this is an accounting theory exam, the candidates think that theory equals practice. This is not usually the situation.

Q.4 The candidates seemed unable to conceptualize - to abstract from practice. They did not read the question and did not provide accounting treatment but merely provided a discussion.

Q.5 Many candidates stated that discount/premium should be amortized. They did not distinguish between fund and estate accounting.

Q.6 The candidates did not answer the question 'yes'or 'no'. They gave descriptions of fund accounting. The need to estimate total costs were rarely mentioned. The candidates appeared to fail to read the question carefully. 'Ever important' does not imply 'never' or 'always' but the candidates answered the question as if these terms were synonymous.

Q.7 This question was handled very well. Three main problems were that the candidates repeated the same criteria over in different ways; they also did not get specific in their answers but talked in generalities about impact on F/S; they did not answer the question re GPL but tended to mix GPL and CVA. They also tended to answer parts 2 to 4 solely in reference to part 1.

CANADIAN CERTIFIED GENERAL ACCOUNTANTS' ASSOCIATION
ADVANCED ACCOUNTING 511 EXAMINATION
MARCH 1980
SUGGESTED SOLUTIONS

Marks | Time: 3 Hours

10 Q. 1. (Source Hendriksen, Ch. 4; Lesson 1 Reading Notes)

(1) (4) Hendriksen (p. 107) points out that the evaluation of existing techniques can be logically done by working backwards. However, he goes on to state that new practices should proceed sequentially, then recycle as necessary.

(5) As for ARC research and recommendations, the course reading notes state that Steps 1 to 6 have not yet been officially adopted and that exposure drafts and recommendations are clearly at Steps 7 and 8.

15 Q. 2.

Mary's Machine Rentals
Income Statement for 1980

Marks		GAAP	FACTOR	GPLA
(3)	Rent revenue	400	(1.05)	$420
(2)	Depreciation	(200)	(1.10)	(220)
	Net Income (B/T)	200		200
(2)	Income Tax	(100)	1.00	(100)
	Net Income (A/T)	100		100
(3)	Price level loss★	-		(20)
		100		$ 80

★ (ave. monetary assets 500 + ½(400) = 700
ave. monetary liabilities 500
net monetary assets 200
@ 10% 20)

Mary's Machine Rentals
Balance Sheet, December 31, 1980

Marks		GAAP	FACTOR	GPLA
(1)	Cash	800	1.00	$ 800
(1)	Machine	1000	1.10	1100
	Accum. Depre.	(200)	1.10	(220)
		$1600		$1680
(1)	Loan payable	500	1.00	$ 500
	Owner's equity:			
	Capital	1000	1.10	1100
(2)	R.E.	100	-	80
		$1600		$1680

Marking note:

All that is required is the GPLA figures; others are to show calculations.

Page 1 of 3

15 Q. 3. (Source, Hendriksen, Ch. 14)

(4) **Conceptually correct** because R. and D. is a period cost (even, regular) which cannot be **causally linked** to period revenues (i.e., what to do with "unsuccessful" research?).

(3) Conceptually correct because capitalization cannot be shown to be **useful** to financial statement readers.

(4) Conceptually incorrect because R and D. expenditures are made for the benefit of future periods. Therefore, R and D should be capitalized and **matched** to future revenues.

(4) Conceptual arguments for **partial capitalization** can be made:

- capitalize variable (not fixed) R. and D. (the direct costing approach).
- capitalize specific development projects (not other R. and D.) because **causal** link can be specified.

15 Q. 4.

		View of inc. tax	**Acctg. treatment implied**
(5)	(i)	an expense, cost incurred to earn revenue	Match costs with revenues; i.e., defer and allocate
(5)	(ii)	a loss, cost incurred but no benefit	Write off as incurred, no deferral
(5)	(iii)	a capital distribution, sim. to dividends	Not belong in Income Stmt.? no deferral or allocation

As pointed out in the lesson 6 notes, GAAP considers income tax as an expense.

10 Q. 5. In general, bond discount and premium are not amortized or used to influence the total income, as measured by cash receipts of interest, derived from the bonds. Any gains or losses resulting from disposition of the bonds at a price above or below the acquisition value are added to or deducted from principal. Of course, there will be variations in practice because of varying provincial laws and specific directions in the trust agreement. A common alternative is that in which the premium or discount is not amortized if the bond constitutes a portion of the contributed trust principal and it is amortized if trust cash is used to invest in the bonds.

10 Q. 6. Yes. Depreciation calculations are important any time one is concerned with projecting the cost of carrying out some project or with studying the cost of providing some service. Depreciation is an important element in discussing the cost of fire protection. Depreciation is not important, however, in setting the budget for the fire department for 1981 or any other year.

25 Q. 7. **TSOE LTD.**

(5) (i) The objective of calculating depreciation based on replacement cost and of determining inventory cost and cost of goods sold using the LIFO method is to match the current cost of goods and services consumed with current revenues. The avowed result of such matching is that it eliminates variations in reported income which are caused by changing prices. The advocates claim that the use of these methods produces a more meaningful income statement.

(6) (ii) There are several assumptions which relate to this problem. Perhaps the major assumption is that which assumes that the purchasing power of the dollar is constant over time. The LIFO method of inventory valuation and the depreciation based on replacement cost have been put forth in order to offset the effect of this unrealistic assumption. A second assumption or convention which has been somewhat responsible for this development is the convention that we account for cost. Had the accountant recognized early that cost is important primarily because it represents value at a particular time, he might have avoided the present conflict. A third assumption or convention, the realization convention, which is dictated by the doctrine of conservatism requiring objectively verifiable information as a basis for accounting information, has also provided the need for such techniques as LIFO and depreciation based on replacement cost.

(6) (iii) The effect on financial statements of the adoption of LIFO as a method of inventory valuation would be to reduce the carrying value of the inventory and to reduce reported net income and the balance of retained earnings. The adoption of depreciation based on replacement cost would be to increase the depreciation charge for the year, thereby reducing net income. If the asset were revalued for balance sheet purposes, the carrying value would be increased and an equity account would have to increase to achieve a balance in the statement. Perhaps an account entitled "unrealized holding gains" could be created to offset the increased carrying value of the asset.

(The above answer assumes a period of inflation)

(4) (iv) The arguments against modifying financial statements for changes in the general price level revolve around the lack of agreement on the solution to the problem and the argument that this would entail a departure from the cost principle and would introduce subjective valuations into the financial statements. The opponents then continue with the arguments that comparability between statements would be lost and, in addition, the very complexity of the adjustments would be confusing to the reader of the statement rather than helpful to him. There is also the feeling among some accountants that the magnitude of inflation in Canada has not been so great as to warrant any departure from presently accepted practice.

(4) The arguments in favor of modifying the financial statements to reflect changes in the purchasing power of the dollar are based on the assumption that unless all dollar measures are stated in terms of the same units, aggregation of the amounts is meaningless because there is no common unit. In addition, the argument is made that although the degree of inflation in Canada has been relatively minor on a year-by-year basis over a period of 15 to 25 years, the life of much of our plant and equipment, the effect has been very significant. The advocates also make the point that translation of acquisition-dollar aggregates to current-dollar aggregates is not a departure from the cost principle but instead is merely a restatement of historic-dollar cost in terms of current dollars. They also argue that the techniques of translating dollar aggregates using price indices is completely objective and in no way involves subjective valuation.

100

END OF SOLUTIONS

CANADIAN CERTIFIED GENERAL ACCOUNTANTS' ASSOCIATION
ADVANCED ACCOUNTING 511 EXAMINATION
JUNE 1980

MARKS — TIME: 3 HOURS

15 Q. 1. The auditor's standard report states that "these financial statements present fairly . . . on a basis consistent with that of the previous year".

Required:
Discuss the two concepts of fairness and consistency in accounting. Include consideration of the advantages and disadvantages of these concepts as part of the conceptual structure of accounting.

10 Q. 2. Currently, there are accounting principle-setting or rule-making processes in place. Describe these processes for:

(5) a) Canada,
(5) b) USA

20 Q. 3. On January 1, 1988, Jill purchased ten shares of Moosegroin Mines Ltd. for $500 (i.e. $50 per share). On December 31, 1988, she still held the shares, which were then trading on the TSE for $55 per share. One year later (December 31, 1989) she sold the ten shares for $550.

The general price-level indices were:

January 1, 1988	100
December 31, 1988	100
December 31, 1989	120

Required:
Using the above facts, present Jill's gains and/or losses for the years 1988 & 1989 in each of the four models specified in the historical cost - current value, literal dollars - purchasing power units matrix presented in the lesson notes.

10 Q. 4. Accounting for pension plan obligations is now under active study in Canada and seems to be a troublesome issue.

Required:

(7) (a) Present the problems involved in accounting for past service costs arising from the introduction of a pension plan or the modification of the benefits payable under an existing plan.

(3) (b) What is the current Canadian solution to these problems?

10 Q. 5. The Axter Trust is created from the remainder of the W. C. Axter estate. The assets held by the estate and all unpaid obligations are itemized as follows:

Cash	$ 92,400
Canada Savings Bonds	100,250
Corporation bonds	60,600
Common stock	192,400
Accrued interest receivable	3,600
Dividends declared, on which day of record has passed	10,500
Total	$459,750

The executor's fee of $12,000, the attorney's fee of $16,000 and the accountant's fee of $7,500 are to be paid by the estate. The remainder of the assets are to be deposited with the trustee of the Axter Trust.

Required:

Record the creation of the trust, assuming these assets constitute the first and only contribution to the trust.

15 Q. 6. Answer the following three questions regarding fund accounting:

(a) Why is the fund accounting system, as opposed to the enterprise accounting system, frequently adopted by many nonprofit organizations?

(b) Why are the budgets of governmental units made a part of the formal accounting system?

(c) What does the term *revenue* mean in fund accounting?

10 Q. 7. Why is depreciation expense recorded in the working capital fund when it is not recorded by the general fund, when the same assets are held by the various operating departments within the general fund, rather than by the working capital fund?

10 Q. 8. Below is the beginning balance sheet of X Co. Ltd.:

X Co. Ltd.

Balance Sheet at the beginning of Period 1

Cash	$ 10,000	Capital stock	$125,000
Inventory (1000 u's)	5,000		
Land	10,000		
Building	100,000		
	$125,000		$125,000

Some accounting data:

(i) Use of FIFO inventory system
(ii) Depreciation is straight line, 10 yr. life, no salvage
(iii) Ignore income taxes
(iv) The general price level remained constant

Some assumptions & transactions:

(i) Purchased 5000 units of merchandise at $6 per unit (on credit).
(ii) Sold 5000 units at $15 (on credit) at a time when the replacement cost was $9 per unit.
(iii) Construction and land costs doubled during the period.
(iv) The replacement cost of the inventory at the end of period 1 was $12 per unit.

Required:

Using the above information, prepare a current value Income Statement and Balance Sheet.

100

END OF EXAMINATION

Page 3 of 3

CANADIAN CERTIFIED GENERAL ACCOUNTANTS' ASSOCIATION
ADVANCED ACCOUNTING 511 EXAMINATION
JUNE 1980
SUGGESTED SOLUTIONS

MARKS TIME: 3 HOURS

15 Q. 1. Sources: Lesson 2 notes; 2:2, 2:4
Hendriksen, Ch. 4; Arnett article (Append. 1))

Fairness (re Arnett)

(3) ADV.: are hard to specify; if we all understand that "present fairly" means in accordance with GAAP then the concept is useful.

(3) DISADV.: In intangible, ethical, Sociological concept, which can't be measured, quantified or evaluated against criteria.

Consistency (re Hendriksen)

(3) ADV.: permits users to forecast by use of time series data.

(3) DISADV.: "sloppy" term, presumably means consistency from period to period, among like items by an entity (i.e., not consistent among entities).
(3) - an "excuse" to inhibit change, better measures.
(3) - not necessary for time series calculations if disclosure (of changes, etc.) is adequate.

(3) **In general:** - the two concepts are incomplete, not adequate in themselves as a conceptual framework. (i.e. why pick these two for the audit report?)
(3) - the two concepts could be in conflict (i.e. to be consistent results in unfair accounting?)

Marking note:
specifying any five of the above should earn full marks.

10 Q. 2. **Rule-making**

(5) (a) **Canada**
(i) the Accounting Research Committee ARC (which is CICA dominated) promulgates Exposure Drafts, which result in *Handbook* recommendations, which become GAAP in Canada (Note legislative legitimacy).

(ii) the Auditing Standards Committee ASC (which is 100% CICA members) promulgates auditing recommendations in a manner similar to the above ARC procedures.

(5) (b) **U.S.A.**
The Financial Accounting Standards Board (FASB) is a professional independent board which issues disclosure drafts and final statements in a manner analogous to the Canadian ARC. The Securities & Exchange Commission (SEC) has the legislative authority which it commonly delegates to the FASB (i.e., the profession), although the SEC can issue its own standards. The American Institute of Certified Public Accountants (AICPA) fills the 'cracks' left by the above two bodies through its two committees ACSEC (accounting) and AUSEC (auditing). The Cost Accounting Standards Board (CASB) issues standards on cost accounting, as applied to government contracts (and therefore performs a very limited role in GAAP formulation).

Page 1 of 5

20 Q. 3.

Attribute		Scale of measurement: literal	purch. power units	
Hist. Cost	1988	no sale, no income (2)	$1988 no sale no income (2)	$1989 (2) 120/100 x ∅ = ∅
Hist. Cost	1989	550 -500 $ 50 (2)	$1989 S.P. 550 500 x $\frac{120}{100}$ = 600 ($50) Loss (2)	
Current Value	1988	550 -500 (2) $ 50 hold. gain	$1988 550 -500 (2) 50	$1989 (2) 120/100 x 50 = $60
Current Value	1989	550 -550 (2) ∅	$1989 S.P. 550 550 x $\frac{120}{100}$ = 660 ($110) Loss (2)	

Point: - using literal $, the two year gain is $50
(timing varies between H.C. & C.V.)

-using p.p. units, the two year *loss* is $50
(timing varies between H.C. & C.V.)

10 Q. 4. (Sources: Lesson notes 6:2 - 6:3, Hendriksen, pp. 478-485, *Handbook* Sec. 3460)

(7) (a) Problems revolve around the issue of whether or not an immediate liability is created (and should be recorded). The magnitude is obtainable by resort to an actuarial calculation which will yield the discounted present value of probable payments. However, the other half of the entry is less clear, because does the amount involve an immediate asset (i.e., better production) or involve an immediate expense?

(3) (b) The current *Handbook* (3460.18) recommendation is that past service costs should be "charged to operations over a reasonable period of years . . ."

Page 2 of 5

10 Q. 5.

(3)	Principal Cash	56,900	
(5)	Investment Control	367,350	
(2)	Trust Principal		424,250

To establish the Axter Trust with the residuary assets of the estate of W.C. Axter as follows:

Canada Savings Bonds	$100,250
Corporation bonds	60,600
Common stock	192,400
Accrued interest receivable	3,600
Dividends receivable	10,500
	$367,350

15 Q. 6. (a) Fund accounting systems are frequently employed by nonprofit organizations because they are often subject to extensive legal controls. Many of these organizations exist at the pleasure of the government. They derive much, and in many cases all, of their revenue via

(5) legislative action. They are thus, in most cases, required to account for the uses of these resources to the legislative body giving them the right to operate. There is, therefore, a legal concept of reporting rather than an economic concept. Since the revenues are seldom related to the services these organizations perform, it is difficult or often impossible to match the revenues and expenses incurred in earning these revenues.

(5) (b) The budgets of governmental units are made a part of the formal accounting system because they are the authority by which the administrator can spend money and make commitments. Budgets to a governmental unit constitute legal authority, whereas budgets to an operating enterprise are advisory and are used primarily for planning and control purposes. For this reason, the budget of the governmental unit constitutes a part of the formal record of its activity.

(5) (c) In fund accounting, revenue is the term used to refer to increases in or additions to assets without a corresponding increase in a liability or reduction in an expenditure in a single fund. The cancellation of a liability without a corresponding decrease in assets or an increase in another liability is also termed revenue. This means that revenue may be recognized by a given fund which is not revenue to the municipality as a whole. For example, the sale of general obligation bonds usually results in revenue being recognized in the bond fund. There is, of course, no revenue from the point of view of the city as a whole. Fund accounting is concerned with the activity of a given fund however, and not with the activity of the city as a whole.

10 Q. 7. Depreciation is recorded when long-lived assets are held by the working capital fund because this is a revolving fund. In general, assets consumed must be replaced without additional appropriation from the general fund or the legislative body. In order to have a revolving fund, charges for service must be related to total cost of providing the service, including the cost of long-lived facilities. In the general fund appropriations are made each year to cover the cash requirements for that year, including purchase of long-lived assets. The depreciation charge is not an expenditure; therefore, it is not considered a reduction in the unused appropriation. The long-lived assets are accounted for in the general fixed assets accounts, which is a separate fund, the function of which is merely to keep track of the assets owned by the city. In general, no attempt is made to match revenues and expenses in fund accounting except for the revolving funds. The revolving funds are quite similar to the business entity. The major difference is that ownership is in the hands of the government rather than individuals.

Q. 8.

X Co. Ltd.

Balance Sheet as at the end of period 1

Cash	$ 10,000	Accts. payable	$ 30,000	
Accounts Rec.	75,000	Capital stock	125,000	(1)
(1) Inventory (at RC)	12,000	Retained earnings	36,000	
(1) Land (CV)	20,000	Unrealized hold. gains	106,000	(2)
(2) Building (net CV)	180,000			
	$297,000		$297,000	

X Co. Ltd.

Income Statement for period 2

Sales	$75,000
(1) Cost of sales	45,000
Gross margin	30,000
Depreciation	20,000
Operating income	10,000
(2) Realized holding gains	26,000
Net income	36,000

Marking notes:
- the realization basis follows the system in Append. III, Lesson 4.
- restatement at each sales/purchase event follows the lesson notes system
- see T-accounts below for calculations

Question 8 T-accounts

Work shown by T-accounts

Cash	
10	

Inventory	
5	45 (a)
(i) 30	
(b) 19	
(d) 3	

Land	
10	
(d) 10	

Building	
100	
(d) 100	

Accum. Depn.	
	20 (e)

Cap. Stock	
	125

A/c Rec.	
(ii) 75	

A/c Pay	
	30 (i)

Sales	
	75 (ii)

Cost of Sales	
(a) 45	

Depn. Expense	
(e) 20	

Unrealized Holding Gains	
(c) 16	19 (b)
(f) 10	113 (d)

Realized Holding Gains	
	16 (c)
	10 (f)

(a) replac. cost = \$9 x 5000 = \$45,000

(b) write up inventory to sales date/value	1000 x \$4 =	4,000
	5000 x \$3 =	15,000
		19,000
(c) realize on sale	1000 x \$4 =	4,000
	4000 x \$3 =	12,000
		16,000
(d) end of period restate.:		
Inventory	1000 x \$3 =	3,000
Land		10,000
Building		100,000
		\$113,000

(e) CV depn. @ 10% = 20,000

(f) Realize as depreciate
10% x \$100,000 = \$10,000

100

END OF SOLUTIONS

CANADIAN CERTIFIED GENERAL ACCOUNTANTS' ASSOCIATION
FINANCIAL CONTROLLERSHIP 516 EXAMINATION
JANUARY, 1980

Note: Show all your calculations neatly. Four tables are attached.

Marks **Time: 3 hours**

12 Q. 1.

(4) (a) Explain what the Canadian financial system consists of.

(4) (b) Explain what is meant by a financial asset.

(4) (c) Discuss the main types of services provided by financial intermediaries.

12 Q. 2. Pat Patterson Ltd. buys 500 boxes of X-100 gadgets every 2 months. Order costs are $380 per order and carrying costs are $1.00 per box. Currently the company purchases each box for $6.50.

Required:

(6) i) Calculate the annual cost of Pat Patterson's inventory policy regarding the X-100 gadgets.

(6) ii) The supplier of gadgets now offers a discount of 5 cents per box if Patterson buys in order sizes of 1,500 boxes. Determine whether the firm should take advantage of the quantity discount.

9 Q. 3. From the viewpoint of the corporation, discuss three advantages of maintaining a predictable dividend policy.

34 Q. 4. (a) The John Parr Co., 75 percent owned by Mr. John Parr Jr., has the opportunity to expand its retail business by purchasing a store in downtown Winnipeg for $240,000 ($160,000 for land and $80,000 for the building). An additional outlay of $25,000 will be necessary to remodel the store. For tax purposes, the undepreciated balance of asset class number 3 will increase by $105,000 if the store is purchased ($80,000 for the building plus $25,000 remodeling costs). Capital cost allowances for asset class number 3 can be calculated on a declining balance basis using a maximum rate of 5 percent.

At the end of the tenth year the firm expects that the store will be demolished (the costs associated with the demolition will be negligible) and plans to sell the land at that time. The value of land has been increasing at 8 percent per year in downtown Winnipeg and this trend is expected to continue into the future.

If the store is acquired, the firm's operating revenue will increase $100,000 a year and its operating costs (excluding CCA and finance charges) will increase $50,000 a year.

The John Parr Co. has a history of limiting its yearly capital expenditures to less than $350,000.

Required:

(17) (i) Assuming that the John Parr Co. uses a 10 percent after-tax cost of capital to evaluate investment decisions and that its tax rate is 40 percent, calculate the NPV associated with the acquisition of the store.

Marks

(b) The management of the John Parr Co. is studying whether to lease the store in downtown Winnipeg from its current owners or whether to borrow the full amount required to purchase and remodel the store. If leased, the current store owners would remodel the store and require lease payments of $36,000 to be made at the end of every year for the next ten years. The firm's bank is willing to extend a 10-year loan at 15 percent to be repaid (principal plus interest) in equal annual installments payable at the end of each year. The bank would require the firm to maintain a minimum current ratio of 4.5 times, and would set limits on the amounts of common dividends the firm can pay during the first three years the loan was outstanding. In addition, the bank would also restrict the amount of additional bank borrowings until the firm's fixed charge coverage ratio exceeds 2.5 times.

Required:

(11) (i) Calculate the cost of leasing (COL) and the cost of purchasing (COP) the store in downtown Winnipeg.

(6) (ii) Discuss the factors which ought to be considered prior to making the final investment and financing decisions regarding the downtown store.

12 Q. 5. Assume that the equity portion of XYZ's capital budget is being financed partly through retained earnings and partly through an offering of new shares. Explain why generally only the cost of issuing new shares is relevant for the calculation of the cost of capital which should be used to evaluate XYZ's marginal investments. Illustrate your answer with an example.

12 Q. 6. Discuss the similarities and differences between stock purchase warrants and rights.

9 Q. 7. Two important changes introduced in the Federal Budget for the 1978 taxation year were the increase in the dividend gross-up from 33⅓% to 50% and the increase in the dividend tax credit from 20% to 25%. Discuss the possible implications of these changes from the viewpoint of:

(4) i) an individual investor.

(5) ii) a corporation.

100

END OF EXAMINATION

CANADIAN CERTIFIED GENERAL ACCOUNTANTS' ASSOCIATION
FINANCIAL CONTROLLERSHIP 516 EXAMINATION
SUGGESTED SOLUTIONS
JANUARY, 1980

Marks **Time: 3 hours**

12 Q. 1.

(4) (a) The Canadian financial system consists of the institutions and markets which assist business units in their: 1) acquisition of goods and services; 2) investment of capital and 3) transfer of financial assets.

(4) (b) A financial asset is a paper claim against an economic unit entitling the holder to some payment of funds.

(4) (c) Financial intermediaries provide the following services:
— pool the savings of several investors to provide large sums of money to borrowers.
— provide liquid assets which may be readily converted into money.
— provide low-risk investments by diversifying risk.
— offer investment expertise.
— offer convenience by providing a variety of financial services.

Marks:
(1) for each service recognized correctly, to a maximum of 4.

12 Q. 2. i) Total Annual Cost = Acquisition Cost + Order Cost + Carrying Cost.

Since the company orders every two months, the annual demand is $6 \times 500 = 3000$ boxes.

(6)

Acquisition Costs	$= \$6.50 \times 3000 = \$19{,}500$
Order Costs	$= 380 \times 6 = \$2{,}280$
Carrying Costs	$= 1 \times \frac{500}{2} = \$250$
Total Costs	$= 19{,}500 + 2{,}280 + 250 = \$22{,}030$

Marks
(2) for correctly calculating acquisition costs.
(2) for correctly calculating order costs.
(2) for correctly calculating carrying costs.
6

(6) ii) If the company takes the discount its total cost will be calculated as:

Acquisition Costs	$= 6.45 \times 3000 = \$19{,}350$
Order Costs	$= 380 \times 2 = \$760$
Carrying Costs	$= 1 \times \frac{1500}{2} = \$750$
Total Cost	$= 19{,}350 + 760 + 750 = \$20{,}860$

By taking the quantity discount the firm will save $1,170 per year.

Marks
(2) for correctly calculating acquisition costs.
(2) for correctly calculating order costs.
(1) for correctly calculating carrying costs.
(1) for correct decision.
6

9 Q. 3. Most firms maintain predictable dividend policies for three main reasons:
1. tends to reduce uncertainty in the mind of investors.
2. tends to maintain investor loyalty.
3. attracts institutional buyers.

34 Q. 4. (a) The NPV of the proposal equals:

$$NPV = -\text{ Initial Outlay} + (1-T)\sum_{t=1}^{10} \text{PV of } \Delta\text{OBBDT} + C\frac{dT}{k+d}$$

$$+ \text{ PV of Land Sale} - \text{PV of Capital Gain Taxes}$$

Initial outlay

(17) The initial outlay will equal the purchase price of the store plus the cost of remodeling, i.e. \$240,000 + \$25,000 = \$265,000.

PV of ΔOBBDT

The yearly increase in operating benefits before depreciation and taxes is \$100,000 − \$50,000 = \$50,000.

$$(1-T)\sum_{t=1}^{10} \text{PV of } \Delta\text{OBBDT} = (1-.4) \times 6.145 \times 50{,}000 = \$184{,}350$$

PV of Tax Shelter

$$C \frac{dT}{k+d} = 105{,}000 \times \frac{.05 \times .4}{.10 + .05} = \$14{,}000$$

PV of Land Sale

The expected market price of the land at the end of the tenth year is equal to the compound value of \$160,000 at 8 percent, i.e. 2.159 × \$160,000 = \$345,440.

The PV of the \$345,440 equals
PV of Land Sale = .386 × \$345,440
= 133,339

PV of Capital Gain Taxes

The taxes paid at the end of the tenth year equal
= ½ × .4 × (345,440 − 160,000)
= ½ × .4 × 185,440
= 37,088
The PV of these taxes equal .386 × 37,088 or \$14,316.

NPV Calculation

NPV = −265,000 + 184,350 + 14,000 + 133,339
−14,316
= −265,000 + 184,350 + 14,000 + 119,023
= 317,373 − 265,000
= 52,373

Marks

(2) for setting up the NPV equation properly
(2) for correctly calculating the initial outlay
(3) for correctly calculating the PV of ΔOBBDT
(3) for correctly calculating the PV of tax shelter
(2) for correctly calculating the future value of the land
(2) for recognizing that the sale of the land should be discounted
(2) for recognizing the existence of capital gains
(1) for recognizing that the taxes on capital gains should be discounted

17

(b) i) **Calculation of the COP**

$$COP = LOAN - C\frac{dT}{d+k_b} - \frac{S}{(1+k)^n}$$

(11) where S is the inflow net of taxes on capital gains due to the sale of the land at the end of the tenth year, k_b is 15% (1−4) or 9%, and k is the after tax cost of capital.

$$COP = 265{,}000 - 105{,}000 \times \frac{.05 \times .4}{.05 + .09} - .386 \times 308{,}352$$

$$= 265{,}000 - 15{,}000 - 119{,}023$$
$$= \$130{,}977$$

Calculation of the COL

COL = PV of lease payments × (1 − T)
= 6.418 × 36,000 × .6
= $138,628

Marks

(3) for correctly setting-up the COP equation
(2) for correctly calculating the PV of tax shelter using k_b
(2) for using k to calculate the PV of S
(2) for correctly setting-up the COL equation
(2) for correctly calculating COL

11

(6) ii) The investment decision should be made prior to the financing decision. Given the condition of capital constraint imposed by the firm, the proposal to invest in the store should be compared with other independent proposals in terms of their NPVs, i.e., a ranking of proposals is necessary. The $265,000 required for the store is a significant outlay compared to the total budget restriction of $350,000 (76%). In addition, approximately 37% (119,023/317,373) of the total cash flows are expected to materialize from the sale of the land at the end of the tenth year. This assumes that land prices will continue to grow at 8 percent. If this growth rate does not materialize the NPV of the proposal will decrease significantly.

The decision as to whether leasing is more desirahle will depend on whether management feels that the benefits inherent in leasing outweigh its higher cost. In this case, the specific advantages of leasing include the lack of restrictive covenants and limits set in the loan agreement. Other considerations which will have a bearing on whether to lease or not include Mr. J. Parr's desire for dividend payments and the availability of other financing alternatives.

12 Q. 5. The cost of new shares becomes the relevant cost due to the marginal principle, i.e., the relevant discount rate to use is that which is calculated on the basis of the marginal costs occasioned by incremental investments. If an investment is not undertaken the cutback on the equity side will be of the more costly new share issue.

For example, assume that a firm wishes to maintain a debt to equity ratio of 1, i.e., its capital structure should consist of 50 percent debt and 50 percent equity. Furthermore, assume that the initial capital budget (over and above CCAs) was estimated to be $20 million and that $5 million will be provided by retained earnings. Thus, the firm plans to raise $10 million through debt at k_b, $5 million through new common shares at k_e and $5 million through retained earnings at k_{re}. Assume that the firm is evaluating an additional investment which requires a $4 million outlay. If the investment is undertaken the firm will have to raise $2 million through debt and $2 million through additional new shares (since retained earnings have already been exhausted). This would increase the financing charges by $2 × k_d + $2 × k_e or $X. The marginal investment should be required to at least cover the entire financing charges of $X. Notice that it was k_e and not k_{re} which was relevant in this computation.

Marks

(6) for correct explanation
(6) for correct illustration

12

12 Q. 6. Both are options to purchase a stated number of shares of common stock at a stated price during a specified period.

The main differences between these two securities are:

- warrants are initially sold attached to a senior security to any investor while rights are issued free to existing common shareholders.
- the duration of the option associated with a warrant is much greater than that associated with a right.
- a rights issue is intended to raise large sums of equity capital quickly, while warrants are exercised years after issue and raise lesser amounts of equity capital.
- the exercise price of the warrant is generally set above the current market price of the stock while the subscription price of the right is set below the current market price of the stock.

Marks

(3) for similarities

(9) for differences (3 marks for each difference correctly recognized)

12

9 Q. 7.

(4) i) These changes have increased investors' after-tax return on Canadian equity investments. Since a similar credit does not exist for interest income nor for dividends from non-Canadian equities, investment in Canadian equities have been made more attractive. Given the higher after-tax rate of return provided by Canadian equities, investors might be more willing to increase their risk exposure. This would result in a shift from investments in fixed income and non-Canadian securities to investments in Canadian common and preferred shares.

(5) ii) First, preferred shares may be issued at a lower dividend yield than otherwise would be possible.

Second, if as a result of a higher after-tax return investors are willing to pay higher prices for Canadian equities, corporates' cost of equity funds will decrease. This will decrease firms' overall costs of capital. Marginal investments which otherwise would be rejected may be accepted given the lower discount rate.

Third, if investors are willing to purchase more Canadian equities the ownership base of many firms will be less concentrated.

100

END OF SOLUTIONS

CANADIAN CERTIFIED GENERAL ACCOUNTANTS' ASSOCIATION
FINANCIAL CONTROLLERSHIP 516 EXAMINATION
MARCH, 1980

Note: Show all your calculations neatly. Four tables are attached.

Marks **Time: 3 hours**

15 Q. 1. Briefly discuss *five* rights and privileges of common equity holders.

9 Q. 2. Explain what is meant by:

(3) (a) participating feature;

(3) (b) extendible bonds; and

(3) (c) underwriting.

12 Q. 3. From the viewpoint of the issuer, discuss three main advantages of financing with preferred shares as opposed to long-term debt.

15 Q. 4. Briefly discuss *three* alternative methods of treating risk when capital budgeting proposals are being analyzed (ignore the informal, "gut-feel", and "seat-of-the-pants" methods).

18 Q. 5. The XYZ Company has decided to finance a new expansion program as follows:

20-year bonds, 12% coupon, $1,000 par value	$ 30,000,000
15-year debentures, 13% coupon, $1,000 par value	20,000,000
Preferred shares, 11%, $100 par value	10,000,000
Retained earnings	40,000,000
New common shares	20,000,000
Depreciation	20,000,000
	$140,000,000

For the bonds and debentures, issuing and underwriting expenses are estimated at 2% of par value. Each preferred share will net the company $97 (including tax shields of expenses and commissions). Common shares are currently trading at $62.50; a new issue would net the company $55.50 per share (including tax shields of expenses and commissions). The company expects to pay $2.50 per share as the next dividend and sustain a long-term average growth of 10% per year. The corporate tax rate is 38 percent.

Disregarding investors' marginal tax rate on dividend income, calculate the following costs:

(6) i) weighted average cost of debt;

(2) ii) cost of preferred shares;

(6) iii) cost of equity

(4) iv) weighted average cost of capital

Page 1 of 2

12 Q. 6. The Bay and Tide Company is in need of an additional $15 million short-term financing. The company has a very good credit rating and excellent relationships with its suppliers and bankers. The following three alternatives are being analyzed:

A. Delay payment of accounts payable. The company purchases average $500,000 per day, thus if accounts payable are extended 30 days the firm will be able to raise the $15 million needed.

The terms obtained from the suppliers are 1/10 net 20. The firm has had a policy of paying on the 10th day after the purchase to take advantage of the discount. This alternative would entail paying on the 40th day after the purchase.

B. Obtain an additional line of credit. The bank is willing to extend the company a line of credit at a rate of 11.75% for the funds borrowed. The bank requires that the company maintain a 15% compensating balance on any loans outstanding.

C. Float commercial paper. The company can sell commercial paper at a cost of 12.5%.

Required:

(8) (a) Determine the effective cost of alternatives A and B.

(4) (b) Select the alternative you would recommend. Justify your answer.

10 Q. 7. Explain why the fundamental principle of share valuation uses dividends instead of earnings per share or net cash flows to arrive at the value of a firm's shares.

9 Q. 8. You need $45,000 at the end of fifteen years. You plan to invest equal amounts every year for the next ten years to achieve your objective.

How much would you have to set aside each year for the next 10 years if you expect to earn 10% during the first 10 years and 14% thereafter?

Assume payments are made at the end of each year.

100

END OF EXAMINATION

CANADIAN CERTIFIED GENERAL ACCOUNTANTS' ASSOCIATION
FINANCIAL CONTROLLERSHIP 516 EXAMINATION
MARCH, 1980
SUGGESTED SOLUTIONS

Marks

15 Q. 1. Rights and privileges of common equity holders include the following:
- — residual right to income
- — residual claim on assets
- — right to transfer shares
- — limited liability
- — right to elect the firm's directors
- — right to make charter amendments
- — right to obtain information about the firm's operations

Marks
3 for each right or privilege discussed.

9 Q. 2.

(3) (a) A feature to be found on some preferred shares providing extra dividend payments if corporate earnings or dividends per common share exceed some given amount. This is not a standard feature. Non-participatory preferred shares are typical.

(3) (b) Debt instruments which provide the holder of the debt with the option to extend the maturity date of the security beyond that originally specified.

(3) (c) The purchase of a new offering of securities by an investment dealer from the issuing firm for future distribution to the public.

12 Q. 3. **Advantages of Preferred Shares over Long Term Debt**

a. From the creditors' viewpoint, preferred shares broaden the firm's equity base increasing its borrowing power.

b. Lower sinking fund requirements.

c. Lower risk of insolvency. The legal obligation of meeting interest payments creates a risk of insolvency while the discretionary obligation of meeting dividends does not.

Marks
4 for each advantage correctly identified.

15 Q. 4. i) Risk-adjusted discount rates.

This method for taking risk into account calls for making adjustments to the discount rates. These adjustments are based on investors' tradeoff functions between risk and return.

ii) Certainty-equivalents.

The decision maker specifies a certainty-equivalent coefficient for every distribution of uncertain cash flows. The expected value of each cash flow is then multiplied by its certainty equivalent. The NPV of the proposal is obtained by discounting the adjusted expected values with the risk-free rate.

iii) Decision trees.

This technique analyzes dependencies between a small number of key variables which affect a project's risk. Decision trees are limited in the degree of complexity and the number of variables which can be incorporated into the analysis.

iv) Simulation.

This is a computer-based technique offering solutions for problems of practically any degree of complexity. This technique calls for the identification of key variables which are expected to affect the investment project's cash flows and the assignment of probability distribution to each factor. Giving due recognition to the likelihood of particular outcomes, the computer is programmed to randomly select values for each variable and to combine them to generate estimated cash flows and NPVs or internal rates of return.

v) Sensitivity analysis.

This technique determines how vulnerable a project's economic desirability is with regards to changes in the values being forecasted.

vi) Payback period.

The payback period, in spite of its shortcomings, is frequently viewed as a rough indication of exposure to risk. In particular, where management is concerned with the risk of having to abandon an investment prematurely, information about a project's payback period may be useful.

Marks

5 for each technique properly discussed.

18 Q. 5. i) We can estimate the firm's cost of debt as the weighted average of the particular costs of the debt instruments used. The total market value of the debt securities is \$30 million + \$20 million = \$50 million. The cost of the bonds is

$\frac{120}{980} \times (1 - .38) = 0.0759$ or 7.59%; while that of the debenture is

$\frac{130}{980} \times (1 - .38) = 0.0822$ or 8.22%.

The firm's cost of debt is:

$$k_b = \frac{30}{50} \times 7.59 + \frac{20}{50} \times 8.22$$
$$= 4.554 + 3.288$$
$$= 7.842\% \text{ or } 7.84\%$$

Marks

(2) for using the correct weights
(2) for adjusting the costs for taxes
(2) for adjusting the costs for the net proceeds
6

ii) $k_p = \frac{\text{dividends on preferred shares}}{\text{net proceeds of preferred shares}}$

$$= \frac{11}{97} = .1134 \text{ or } 11.34\%$$

Marks

2 for correct answer

iii) The cost of equity will be that of the new common shares.

$$k_e = \frac{Do}{NP_e} + g$$
$$= \frac{2.50}{55} + .10$$
$$= .045 + .10$$
$$= .145 \text{ or } 14.5\%$$

Marks

(3) for recognizing that the cost of equity is the cost of new common shares
(3) for correctly calculating the yield adjusted for net proceeds
6

iv) The weighted average cost of capital is calculated as follows:

Source	**Amount** (in millions of \$)	**Proportion**	**Cost** (in %)
debt	50	50/120 = .4166	7.84
preferred	10	10/120 = .0833	11.34
equity	60	60/120 = .5000	14.50
	120		

$$k = .4166 \times 7.84 + .0833 \times 11.34 + .5000 \times 14.5$$
$$= 3.266 + .945 + 7.250$$
$$= 11.461\% \text{ or } 11.46\%$$

Notice that depreciation has been excluded and that the cost of equity is that of the new common shares.

Marks

4 for recognizing that \$120 million is the relevant amount for the calculations of weights

12 Q. 6. (a) **Alternative A**

The cost of foregoing the discount is

$$= \frac{1}{(100 - 1)} \times \frac{365}{(40 - 10)}$$

$= .1229$

$= 12.29\%$

If 360 days were used the answer is 12.12%

Alternative B

Amount borrowed	$= \$15,000,000 + .15 \times 15,000,000$
	$= 1.15 \times 15,000,000$
	$= \$17,250,000$
Interest	$= .1175 \times 17,250,000$
	$= \$2,026,875$
Effective cost	= Interest/Amount needed
	$= .1351$
	$= 13.51\%$

Marks

(4) for correct answer for alternative A

(4) for correct answer for alternative B

8

(b) Alternative A has the lowest cost. However, this entails paying suppliers 20 days past the due date. This would adversely affect the firm's good relationship with its suppliers. Alternative C has the second lowest cost. Is the .21% difference between alternatives A and C worth the loss of credit reputation? Most managers would issue commercial paper.

Marks

4 for appropriate discussion based on student's answer to part (a).

10 Q. 7. The earnings of a firm are divided between retained earnings and dividends. The only value of retained earnings to the shareholder lies in the fact that they are reinvested to increase dividend payments in the future. The only real return a shareholder receives are dividend
(5) payments.

(5) If cash flows were to form the basis of share valuation, we would not only need to include retained earnings alongside dividends, but we would also have to include depreciation. However, depreciation is not a return to the shareholder; it is an amount which reflects the wear and tear of assets.

9 Q. 8. Let P be the amount which will be invested at the end of each year for the next ten years.

The sum accumulated at $t = 10$ will equal the future value of a 10 period annuity @ 10%, i.e., $P \times 15.937$. This sum will grow @ 14% during the next 5 years; thus, at $t = 15$ this sum equals $1.925 \times P \times 15.937$. This amount should equal $45,000.

$45,000 = 1.925 \times P \times 15.937$

$45,000 = 30.678\ P$

$P = \$1,467$

Marks

(3) for setting up the future value of the annuity correctly

(3) for compounding correctly the sum found at $t = 10$

(3) for correct solution

9

100

END OF SOLUTIONS

CANADIAN CERTIFIED GENERAL ACCOUNTANTS' ASSOCIATION
AUDITING 517 EXAMINATION
JANUARY, 1980

Marks **Time: 3 Hours**

15 Q. 1. A CGA's report on financial statements includes his opinion as to whether the statements are presented in accordance with generally accepted accounting principles. In evaluating the general acceptability of an accounting principle, the CGA must determine whether the principle has substantial authoritative support.

Required:

(5) (a) Describe the procedure that a CGA should follow in forming an opinion as to whether he should accept an accounting principle proposed by a client for use in preparing the current year's financial statements. Assume that the principle has been consistently applied.

(5) (b) Cite primary sources and authorities which a CGA might consult in determining whether an accounting principle has substantial authoritative support. (A source is primary if it is sufficient evidence by itself to constitute substantial authoritative support.)

(5) (c) Cite secondary sources and authorities which the CGA might consult in determining whether an accounting principle has substantial authoritative support. (A source is secondary if it must be combined with one or more other secondary sources to constitute substantial authoritative support.)

15 Q. 2. The following balance sheet is for the partnership of Allan, Billie and Carrie:

Cash	$ 20,000	Liabilities	$ 50,000
Other assets.	180,000	Allan, capital (40%)	37,000
		Billie, capital (40%)	65,000
		Carrie, capital (20%). . . .	48,000
	$200,000		$200,000

Figures shown parenthetically reflect agreed profit and loss sharing percentages. The partnership is dissolved and liquidated by selling the other assets for $100,000 and paying off the creditors.

Required:

The partners are unclear as to how to divide the proceeds of liquidation. You have been handling the audit of the partnership, so they ask you to make the calculations and to complete the continuity schedules which you have been preparing each year for the partners' accounts.

Marks

12 Q. 3. Select the best answer for each of the following items which relate to price-level accounting. Mark only one answer for each item.

(1) When general price-level balance sheets are prepared, they should be presented in terms of:

(a) The general purchasing power of the dollar at the latest balance sheet date.

(b) The general purchasing power of the dollar in the base period.

(c) The average general purchasing power of the dollar for the latest fiscal period.

(d) The general purchasing power of the dollar at the time the financial statements are issued.

(e) None of the above.

(2) The restatement of historical-dollar financial statements to reflect general price-level changes results in presenting assets at:

(a) Lower of cost or market values.

(b) Current appraisal values.

(c) Costs adjusted for purchasing power changes.

(d) Current replacement costs.

(e) None of the above.

(3) During a period of deflation an entity would have the greatest gain in general purchasing power by holding:

(a) Cash.

(b) Plant and equipment.

(c) Accounts payable.

(d) Mortgages payable.

(e) None of the above.

(4) For comparison purposes, general price-level financial statements of earlier periods should be restated to the general purchasing power dollars of:

(a) The beginning of the base period.

(b) An average for the current period.

(c) The beginning of the current period.

(d) The end of the current period.

(e) None of the above.

Marks

(5) Gains and losses on nonmonetary assets usually are reported in historical-dollar financial statements when the items are sold. Gains and losses on the sale of nonmonetary assets should be reported in general price-level financial statements.

(a) In the same period, but the amount will probably differ.

(b) In the same period and the same amount.

(c) Over the life of the nonmonetary asset.

(d) Partly over the life of the nonmonetary asset and the remainder when the asset is sold.

(e) None of the above.

(6) If land were purchased in 1951 for $100,000 when the general price-level index was 100 and sold at the end of 1970 for $160,000 when the index was 170, the general price-level statement of income for 1970 would show:

(a) A general price-level gain of $70,000 and a loss on sale of land of $10,000.

(b) A gain on sale of land of $60,000.

(c) A general price-level loss of $10,000.

(d) A loss on sale of land of $10,000.

(e) None of the above.

Marks

30 Q. 4. CGA, is examining the financial statements of the Downsville Sales Ltd., which recently installed an off-line electronic computer. The following comments have been extracted from CGA's notes on computer operations and the processing and control of shipping notices and customer invoices.

> To minimize inconvenience Downsville converted without change its existing data processing system, which utilized tabulating equipment. The computer company supervised the conversion and has provided training to all computer department employees (except key punch operators) in systems design, operations and programming.
>
> Each computer run is assigned to a specific employee, who is responsible for making program changes, running the program and answering questions. This procedure has the advantage of eliminating the need for records of computer operations because each employee is responsible for his own computer runs.
>
> At least one computer department employee remains in the computer room during office hours, and only computer department employees have keys to the computer room.
>
> Systems documentation consists of those materials furnished by the computer company ..... a set of record formats and program listings. These and the tape library are kept in a corner of the computer department.
>
> The Company considered the desirability of programmed controls but decided to retain the manual controls from its existing system.
>
> Company products are shipped directly from public warehouses which forward shipping notices to general accounting. There a billing clerk enters the price of the item and accounts for the numerical sequence of shipping notices from each warehouse. The billing clerk also prepares daily adding machine tapes ("control tapes") of the units shipped and the unit prices.
>
> Shipping notices and control tapes are forwarded to the computer department for key punching and processing. Extensions are made on the computer. Output consists of invoices (in six copies) and a daily sales register. The daily sales register shows the aggregate totals of units shipped and unit prices which the computer operator compares to the control tapes.

Marks

All copies of the invoice are returned to the billing clerk. The clerk mails three copies to the customer, forwards one copy to the warehouse, maintains one copy in a numerical file and retains one copy in an open invoice file that serves as a detail accounts receivable record.

Required:

Describe ten weaknesses in internal control over information and data flows and the procedures for processing shipping notices and customer invoices. Recommend improvements in these controls and processing procedures. Organize your answer sheets as follows:

Weakness	Recommended Improvement

12 Q. 5. The major written understandings between a CGA and his client, in connection with an examination of financial statements, are the engagement letter and the client's representation letters.

Required:

(6) (a) 1. What are the objectives of the engagement letter?

2. Who should prepare and sign the engagement letter?

3. When should the engagement letter be sent?

4. Why should the engagement letter be renewed periodically?

(6) (b) 1. What are the objectives of the client's representation letters?

2. Who should prepare and sign the client's representation letters?

3. When should the client's representation letters be obtained?

4. Why should the client's representation letters be prepared for each examination?

Marks

16 Q. 6. Select the best answer for each of the following items relating to financial statements and the auditors' report. Indicate only one answer.

(1) An auditor's opinion exception arising from a limitation on the scope of his examination should be explained in:

(a) A footnote to the financial statements.

(b) The auditor's report.

(c) Both a footnote to the financial statements and the auditor's report.

(d) Both the financial statements (immediately after the caption of the item or items which could not be verified) and the auditor's report.

(2) An auditor need make no reference in his report to limitations on the scope of his audit if he:

(a) Finds it impracticable to confirm receivables but satisfies himself by other procedures.

(b) Does not audit the financial statements of an unaudited subsidiary that represents 75% of the parent's total assets.

(c) Omits confirmation of receivables at the client's request but satifies himself by other procedures.

(d) Does not observe the opening inventory and is unable to satisfy himself by other procedures.

(3) Footnotes to financial statements should not be used to:

(a) Describe the nature and effect of a change in accounting principles.

(b) Identify substantial differences between book and tax income.

(c) Correct an improper financial statement presentation.

(d) Indicate bases for valuing assets.

(4) A CGA is completing his examinaiton of the financial statements of the Juneau Service Company for the year ended April 30, 1972. During the year Juneau's employees were granted an additional week's vacation, and this had a material effect upon vacation pay expense for the year and the accrued liability for vacation pay at April 30, 1972. In the opinion of the CGA, this occurence and its effects have been adequately disclosed in a footnote to the financial statements. In his auditor's report, the CGA normally will:

(a) Omit any mention of this occurence and its effects.

(b) Refer to the footnote in his opinion paragraph but express an unqualified opinion.

(c) Refer to the footnote and express an opinion that is qualified as to consistency.

(d) Insist that comparative statements for prior years be restated or express an opinion that is qualified as to consistency.

Marks

(5) The primary responsibility for the adequacy of disclosure in the financial statements and footnotes rests with the:

(a) Partner assigned to the engagement.

(b) Auditor in charge of field work.

(c) Staffman who drafts the statements and footnotes.

(d) Client.

(6) The use of an adverse opinion generally indicates:

(a) Uncertainty with respect to an item that is so material that the auditor cannot form an opinion on the fairness of presentation of the financial statements as a whole.

(b) Uncertainty with respect to an item that is material but not so material that the auditor cannot form an opinion on the fairness of the financial statements as a whole.

(c) A violation of generally accepted accounting principles that has a material effect upon the fairness of presentation of the financial statements, but is not so material that a qualified opinion is unjustified.

(d) A violation of generally accepted accounting principles that is so material that a qualified opinion is not justified.

(7) The use of a disclaimer of opinion might indicate that the auditor:

(a) Is so uncertain with respect to an item that he cannot form an opinion on the fairness of presentation of the financial statements as a whole.

(b) Is uncertain with respect to an item that is material but not so material that he cannot form an opinion on the fairness of presentation of the financial statements as a whole.

(c) Has observed a violation of generally accepted accounting principles that has a material effect upon the fairness of presentation of financial statements, but is not so material that a qualified report is unjustified.

(d) Has observed a violation of generally accepted accounting principles that is so material that a qualified opinion is not justified.

(8) An auditor's "subject to" report is a type of:

(a) Disclaimer of opinion.

(b) Qualified opinion.

(c) Adverse opinion.

(d) Standard opinion.

100

END OF EXAMINATION

CANADIAN CERTIFIED GENERAL ACCOUNTANTS' ASSOCIATION
ACCOUNTING 517 EXAMINATION
JANUARY 1980
EXAMINER'S COMMENTS

General

The legibility, language, spelling and organization of many papers left much to be desired. Markers must give credit for content and make no deductions for presentation, but some papers were so poorly written that their meaning defied analysis, even after repeated attempts by the marker to decipher the contents.

Specific

Q.1 The authors cited in the question to discuss objections to the *calculation* of depreciation, but many students concentrated on objections about the *cost basis* for depreciation. This indicated unfamiliarity with readings and assignments for Lessons 1 and 5 and poor exam technique (since questions 2 and 8 were directly on GPLA and CU).

Strange as it may seem, some candidates made statements like, 'Depreciation's purpose is to set aside money for replacement of assets.'

Q.2 The simple answer to this question was to suggest GPLA, to fix the scaling error due to the false assumption of a constant dollar. For some reason, possibly conceptual confusion, many candidates wanted to introduce current cost (value) considerations into their answer; and, as long as it was done properly, it was possible to do so and still earn good marks. Hendriksen tends to be a bit confusing on the topic (as are some other authors and ARC), but the lesson notes seem crystal-clear.

Q.3 This question was generally poorly answered because many candidates did not know what segmented information was and often those who did know were unable to articulate reasons why segmented information was required. Many candidates confused segmented information with the individual financial statements of subsidiaries as though they thought such statements were not here-to-for prepared.

Q.4 This question was not generally well answered because many students were unfamiliar with lease accounting in Canada and those who were, tended to concentrate on lease accounting practice and ignore the conceptual issues. The Handbook Section 3065 was not required reading, but the conceptual issues were discussed extensively in Hendriksen.

Q.5 This question was generally well answered. Some students explained well the fiduciary equation but neglected the enterprise equation and this is just poor exam technique.

Q.6 This straightforward question was well answered. Most marks were lost because candidates omitted information (the share principals, income elements, etc.). Candidates who answered on the basis of their provincial legislation rather than the course materials should have quoted their source. All CGA's should know the difference between a principle and a principal.

Q.7 This question was generally well answered and, again, many marks were lost through omission of part of the answer; why utilities *do* record depreciation. Again, some candidates made statements like, 'Depreciation results in the accumulation of cash to replace assets.'

Q.8 This question was also well answered (and could have served as a good example for answering Question 2). Some candidates were strong on calculation but weak on discussion of GAPP and other issues.

CANADIAN CERTIFIED GENERAL ACCOUNTANTS' ASSOCIATION
AUDITING 517 EXAMINATION
SUGGESTED SOLUTIONS
JANUARY, 1980

Marks

Time: 3 Hours

15 Q. 1.

(5) (a) Is the principle generally accepted?

(1) Determine the circumstances surrounding the transaction or condition being reported on.

(2) Determine alternative treatments available and the degree of support for each, by surveying relevant literature and present practices.

(3) Judge the applicability of the alternatives in terms of the particular circumstances.

A good answer must assume that alternative treatments are available for reporting the particular circumstances.

(5) (b) Primary source has to be the CICA Handbook, especially in the light of Canadian corporation legislation. Mention could be made of the Accounting Research Committee, its exposure drafts, and final revisions to the Handbook. Other primary sources are the relevant Companies or Securities Acts. It is not correct for Canada, to list APB, AICPA, SEC, FASB, etc.

(5) (c) Secondary sources include:

(1) pronouncements of industry regulatory authorities.

(2) substantial practice within an industry. Evidence may come from publications listed on 517-1:3.

(3) research studies and disclosure drafts of the Accounting Research Committee.

(4) publications of foreign bodies (AICPA, FASB, Accountants' International Study Group, International Accounting Standards Committee, etc.)

(5) federal, provincial or municipal laws and court decisions

(6) publications of industry associations

(7) publications of respected accounting individuals

Source: 517-1:1 to 1:3

Marks

15 Q. 2. **Continuity Schedule**

	Allan	Billie	Carrie	Total
Opening balances	$37,000	$65,000	$48,000	$150,000
Loss on liquidation	(32,000)	(32,000)	(16,000)	(80,000)
Post liquidation	5,000	33,000	32,000	70,000
Pay out cash	(5,000)	(33,000)	(32,000)	(70,000)
	0	0	0	0

Marks Continuity schedule format 5

Loss shared on P & L ratios 5

Cash shared on capital ratios 5

15

Source: 517-3:3, 3:4

12 Q. 3. (1) a (balance sheet date)

(2) c (the essence of GPLA!)

(3) a (opposite to period of inflation)

(4) d (must be on same basis to be comparable)

(5) a (no change in realization principle)

(6) d (loss in current $)

Marks + 2 for correct answers
- 1 for incorrect answers
no penalty for omissions

Source: 517-4:8, Handbook Guideline.

Page 2 of 7

Marks

30 Q. 4. Below are listed 14 internal control weaknesses and recommended improvements.

Marks should be: one for identification and two for improvement.

Weakness	Recommended Improvement
Computer department functions have not been properly separated. Under existing procedures, one employee completely controls programming and operations.	The functions of systems analysis and design, programming, machine operation and control should be assigned to different employees. This also should improve efficiency since different levels of skill are involved.
Records of computer operations have not been maintained.	In order to properly control usage of the computer, a usage log should be kept and reconciled with running times by the supervisor. The system also should provide for preparation of error lists on the console typewriter. These should be removable only by the supervisor or a control clerk independent of the computer operators.
Physical control over computer operations is not adequate. All computer department employees have access to the computer.	Only operating employees should have access to the computer zoom. Programmers' usage should be limited to program testing and debugging.
System operations have not been adequately documented. No record has been kept of adaptations made by the programmer or new programs.	The Company should maintain up-to-date system and program flow charts, record layouts, program listings and operator instructions. All changes in the system should be documented.
Physical control over tape files and system documentation is not adequate. Materials are unguarded and readily available in the computer department. Environmental control may not be satisfaetory.	Programs and tape libraries should be carefully controlled in a separate location. Preferably a librarian who does not have access to the computer should control these materials and keep a record of usage. The Company should consult with the computer company about necessary environmental controls.
The Company has not made use of programmed controls. Some of the procedures and controls used in the tabulating system may be unnecessary or ineffective in the computerized system.	Programmed controls should be used to supplement existing manual controls, and an independent review should be made on manual controls and tabulating system procedures to determine their applicability. Examples of computer checks that might be programmed include data validity tests, check digits, limit and reasonableness tests, sequence checks and error routines for unmatched items, erroneous data and violations of limits.

Marks

Weakness	Recommended Improvement
Insertion of prices on shipping notices by the billing clerk is inefficient and subject to error.	The Company's price list should be placed on a master file in the computer and matched with product numbers on the shipping notices to obtain appropriate prices.
Manual checking of the numerical sequence of shipping notices also is inefficient.	The computer should be programmed to check the numerical sequence of shipping notices and list missing numbers.
Control over computer input is not effective. The computer operator has been given responsibility for checking agreement of output with the control tapes. This is not an independent check.	The billing clerk (or another designated control clerk) should retain the control tapes and check them against the daily sales register. This independent check should be supplemented by programming the computer to check control totals and print error messages where appropriate.
The billing clerk should not maintain accounts receivable detail records.	If receivable records are to be maintained manually, a receivable clerk who is independent of billing and cash collections should be designated. If the records are updated by the computer department, as recommended below, there still should be an independent check by the general accounting department.
Accounts receivable records are maintained manually in an open invoice file.	These records could be maintained more efficiently on magnetic tape.
The billing clerk should not receive or mail invoices.	Copies of invoices should be forwarded by the computer department to the customer (or to the mailroom) and distributed to other recipients in accordance with established procedures.
Maintaining a chronological file of invoices appears to be unnecessary.	This file's purpose may be fulfilled by the daily sales registers.
Sending duplicate copies of invoices to the warehouse is inefficient.	The computer can be programmed to print a daily listing of invoices applicable to individual warehouses. This will eliminate the sorting of invoices.

Source: Lesson 7&8 notes, Porter, Q.2, p.108.

Marks

12 Q. 5.

(3) a. (1) The objectives of the engagement letter are:

(a) To make sure that the CGA and his client are in agreement as to the nature of the engagement,

(b) To inform the client about the scope of the CGA's work and what may be expected to result,

(c) To provide a written record of the responsibilities assumed by the CGA and those retained by the client. (This understanding protects both the CGA and his client.)

(1) (2) The CGA usually prepares the engagement letter as a follow-up to a verbal understanding that he and his client have reached. It is desirable that the client endorse and return an approved copy of the engagement letter to the CGA. It is also acceptable for the client to prepare his own letter summarizing his understanding of the nature of the engagement.

(1) (3) Preferably the engagement letter should be sent at the beginning of the engagement so that misunderstandings, if any, can be remedied.

(1) (4) Obviously, the engagement letter will be most useful in clarifying misunderstandings on a first engagement, but it is desirable that the letter be renewed periodically. Client personnel or the nature of the engagement may change, and resubmission of the letter gives both parties an opportunity to review the circumstances. Accordingly, for recurring examinations of financial statements, it is appropriate to prepare an engagement letter at the start of each examination. For other continuing engagements, the engagement letter also should be updated periodically ..... probably on a yearly basis.

Marks

(3) b. (1) The objectives of the client's representation letter are to:

(a) Provide written documentation for the client's replies to inquiries made by the CGA in the course of his examination of the client's financial statements. This is particularly important for information that is not shown in accounting records or might not otherwise be discovered.

(b) Avoid misunderstandings as to client representations and force the client to consider the correctness of his representations.

(c) Remind the client of his primary responsibility for the financial statements.

(d) Complement (rather that substitute for) the CGA's examination of the financial statements.

(1) (2) Representation letters should be prepared on the client's stationery and signed by appropriate officers and employees. In most cases the CGA will draft the representation letter, but the officer or employee must accept the statements in the letter as his own representations.

It is important that the representation letter be signed by one or more officers or responsible employees who are knowledgeable about the particular area or activity reported upon. For example (and depending on the circumstances), the company secretary might prepare the representation concerning minutes of the board of directors, the controller might affirm the fair presentation of the financial statements and recording of liabilities, and the purchasing agent might report on purchase commitments.

(1) (3) All client representations should be obtained before the end of field work. If the representation letter refers to events occurring in the subsequent period, it is appropriate that the letter be signed, dated, and delivered to the auditor on the last day of field work.

(1) (4) Client representation letters are evidential matter supporting the auditor's opinion. Accordingly, they should be prepared for each succeeding examination of financial statements. If the auditor's report is updated, he should obtain from the client an additional representation as to events occurring subsequent to the date of his previous report.

Source: Meigs, pp. 110, 215-6, 291; Public Practice Manual, p. 503 Code #201.

Marks

16 Q. 6. (1) b

(2) a

(3) c

(4) a

(5) d

(6) d

(7) a

(8) b

Marks + 2 for each correct answer
- 1 for each incorrect answer
No penalty for omissions

Source: Meigs Ch. 21, HB, Sec. 550.

100

END OF SOLUTIONS

Page 7 of 7

CANADIAN CERTIFIED GENERAL ACCOUNTANTS' ASSOCIATION
AUDITING 517 EXAMINATION
MARCH 1980

MARKS — TIME: 3 HOURS

10 Q. 1. You know that the auditor's independence is essentially a state of mind. However, all serious studies on this matter mention that under some circumstances, the auditor cannot be totally independent.

Required:

What are these circumstances which impair the auditor's independence?

10 Q. 2 The advent of electronic data processing has forced public auditors to develop new procedures and to accept new criteria in order to adequately perform their duties.

Required:

Generally speaking, how has E.D.P. affected the auditor's work and what problems has it generated?

20 Q. 3 The second sentence in the scope paragraph of the auditor's report reads as follows: "My examination was made in accordance with generally accepted auditing standards, and accordingly included such tests and other procedures as I considered necessary in the circumstances."

The generally accepted auditing standards referred to by the professional accountant can be divided into three general categories: *general standards, field work standards,* and *reporting standards.*

Required:

Using this classification, list the generally accepted auditing standards which must be observed by the professional accountant taking into account the wording of the auditor's report.

15 Q. 4 A client calls you to discuss several accounting, procedure and internal control problems his company is faced with. He would like you to use your knowledge and experience to solve these problems. However, he is concerned about your approach because he has had experience only with formal audits to date. Therefore, you promise to send him a letter describing the approach you use for special system reviews, and the format of your report.

Required:

What points will you cover in your letter?

10 Q. 5 According to the generally accepted accounting principles, business firms must match revenues and expenditures. However, it seems that this statement is not always true where non-profit organizations are concerned.

Required:

What are the accounting and recording procedures, with respect to receipts and disbursements, used by non-profit organizations?
Explain each one of them, and give at least one example for each one of them.

15 Q. 6 In statistical sampling, stratification is a technique used to divide a population into homogeneous subgroups.

Chuck G. Anderson, C.G.A., the auditor of the Sell Anything Co., decides to stratify the company's inventory according to three criteria:

1) High value items.
2) Key items.
3) Representative items.

While reviewing the company's accounts receivable, the C.G.A. checks the prices recorded on 120 accounts, 10 of which are related to high value items, 10 to key items, and 100 to representative items. This test enables him to discover the following 7 errors:

ITEM NO.	NATURE OF TEST	SALE PRICE AS PER PRICE LIST	SALE PRICE ON BILL
1	Key item	$ 420	$4,200
520	Representative item	34	17
541	Representative item	1,460	1,314
1,376	Representative item	430	215
1,480	Representative item	176	352
715	Representative item	20	-0-
320	High value item	6,800	8,500

Additional information:

1) The total sale value of the checked items is $450,000 according to the price list.
2) The total number of checked items is 8,020.
3) The total sale value of the 10 items of high value which were checked is $75,000.
4) The total sale value of the 10 key items which were checked is $5,000.

Required:

Determine the most probable error, in terms of dollars, to be found in the accounts receivable

a) if the representative items were selected according to their value.
b) if the representative items were selected according to their quantity.

20 Q. 7 Multiple choice. Select the best answer to each of the following questions and place the letter of your answer beside the number of the question in your exam booklet. (eg. 22-a)

1. The purpose of auditing is:
   a) To draw flow charts.
   b) To form an opinion on financial statements.
   c) To send a management letter.
   d) To prepare income tax returns.

2. What would you do if you read an article by a C.G.A. colleague published in a business magazine, and felt that it would bring him several clients?
   a) Report him to the C.G.A. Disciplinary Committee.
   b) Write to him to inform him that he is not allowed to do such a thing.
   c) Forget him.
   d) Sue him.

3. What would you do if one of your clients asked your advice on how to declare his income so as to defraud the Income Tax Department?
   a) Simply advise him.
   b) Advise him and inform him of the dangers of such an action.
   c) Report him to the Income Tax Department.
   d) Refuse to advise him.

4. What would you do if one of your clients offered you a share of his company so that you would become a director of his company?
   a) Accept the share and have it made out in your spouse's name.
   b) Simply accept the share made out in your name.
   c) Accept the share and mention the fact in your auditor's report.
   d) None of the above.

5. In the course of your audit review, you realize that the financial statements contain misleading information. What do you do?
   a) You prepare a normal report without any reservations.
   b) You do not prepare any report.
   c) You prepare a report with the appropriate reservation.
   d) You prepare the "Accountant's Comments".

6. Which one of the following criteria is not used to determine the scope of the tests to be made?
   a) The adequacy of internal control.
   b) The available time.
   c) The persuasiveness of the evidence.
   d) None of the above.

7. Physical observation of inventory is an example of what type of audit evidence:
   a) Physical evidence.
   b) Oral and documentary evidence.
   c) Circumstantial evidence.
   d) Evidence provided by subsequent events.

8. Which one of the following types of audit evidence ensures the highest degree of reliability?
   a) Evidence created outside the client organization and obtained through the client.
   b) Evidence created and held within the client organization.
   c) Evidence created outside the client organization and transmitted directly to the auditors.
   d) Evidence created within the client organization and circulated outside.

9. The purchase order issued by a firm is an example of what type of audit evidence?
   a) Evidence created within the client organization and circulated outside.
   b) Evidence created and held within the client organization.
   c) Oral and documentary evidence.
   d) Evidence created outside the client organization and transmitted directly to the auditors.

10. What would you do if your supervisor asked you to perform a stratified sampling of the accounts receivable?
    a) Select the accounts on a random basis.
    b) Select the accounts at regular intervals.
    c) Select the accounts of the same letter, i.e. from letter A to letter F for example.
    d) Attach more importance to the accounts of a greater value.

11. You are reviewing the cheques and have decided to check every fiftieth one. What kind of sampling is this?
    a) Stratified sampling.
    b) Systematic sampling.
    c) Cluster sampling.
    d) Random sampling.

12. The broad concept of internal control includes three major types of controls, namely:
    a) Administrative, budgetary and financial controls.
    b) Accounting, reciprocal and budgetary controls.
    c) Administrative, accounting and physical controls.
    d) None of the above.

13. Which one of the following items is not an internal control item?
    a) Annual financial statements.
    b) Adequate recording system.
    c) Compulsory holidays for all employees.
    d) Internal auditing system.

14. The major characteristic of the internal control of a small business is:
    a) No division of duties.
    b) No periodical reports.
    c) Problem in establishing controls.
    d) Accounting operations are not mechanized.

15. When reviewing the internal control of a small company, the auditor must ensure most of all that:
    a) Cheques and sales invoices are pre-numbered.
    b) Books are balanced every month.
    c) Employees are competent.
    d) The lack of internal checks is offset by the controls performed by the manager.

16. What measure should be taken in a firm where one person prepares cash sales invoices, handles cash, and hands over the merchandise?
    a) A cash register should be bought.
    b) Invoices should be pre-numbered in four copies.
    c) Duties should be segregated.
    d) A perpetual inventory should be held.

17. What does the following definition correspond to? An administrative control the purpose of which is to measure and evaluate other controls:
    a) External auditing.
    b) Internal control.
    c) Budgetary controls.
    d) Internal auditing.

18. Which one of the following examples is an example of fraud perpetrated without manipulating the books?
    a) Lapping
    b) Wrong total of cash receipts.
    c) Nonexistent person on payroll.
    d) None of the above.

19. The rules of professional conduct relative to the auditor's independence must be viewed this way:
    a) The auditor may ignore them if he has reasons to do so.
    b) The auditor must try to comply with these rules as much as possible.
    c) The auditor should not worry about them.
    d) These rules have the force of law for the auditor.

20. What type of evidence is provided by the review of the accounts receivable paid after the end of the year?
    a) Circumstantial evidence.
    b) Evidence provided by subsequent events.
    c) Physical evidence.
    d) Documentary evidence created outside the client organization and transmitted directly to the auditor.

100

END OF EXAMINATION

CANADIAN CERTIFIED GENERAL ACCOUNTANTS' ASSOCIATION
AUDITING 517
MARCH 1980
SUGGESTED SOLUTIONS

MARKS

10 Q. 1. The auditor's independence cannot be total in the following cases:
- Where the auditor has a substantial financial interest in the client enterprise as a shareholder.
- Where the auditor acts as a bookkeeper for the client.
- Where the auditor is a director of the client's company.
- Where the auditor has financial dealings with the client as a debtor or creditor.
- Where the auditor's spouse or close relatives have a substantial financial interest in the client enterprise as shareholders.

Source: Lesson Notes 517-1:2.

10 Q. 2.

1. Different criteria must be established for the evaluation of internal control. No longer is the division of duties as clearly defined as it was in a manual system. Parts of the system may involve an outside data centre not accessible to the auditor.

2. The conventional audit procedures may be both slow and difficult, particularly where there are large volumes of transactions treated by the computer.

3. Gaps may be present in the audit trail, making conventional auditing techniques impossible. The auditor must then refer to the audit of the programs themselves.

4. The conventional manual techniques (such as the double-checking of the processing operation, the requirement for many clerical approvals, and the use of visual editing or scrutiny) usually disappear in a computer-oriented system.

20 Q. 3 1. **General standard:**

The examination should be performed and the report prepared by a person or persons having adequate technical training and proficiency in auditing, with due care and with an objective state of mind.

2. **Field work standards:**
   i) The work should be adequately planned and properly executed. If assistants are employed they should be properly supervised.
   ii) There should be an appropriately organized study and evaluation of those internal controls on which the auditor subsequently relies in determining the nature, extent and timing of auditing procedures.
   iii) Sufficient appropriate audit evidence should be obtained, by such means as inspection, observation, enquiry, confirmation, computation and analysis, to afford a reasonable basis to support the content of the report.

3. **Reporting standards:**
   i) The scope of the auditor's examination should be referred to in the report.
   ii) The report should contain either an expression of opinion on the financial statements or an assertion that an opinion cannot be expressed. In the latter case, the reason therefore should be stated.
   iii) Where an opinion is expressed, it should indicate whether the financial statements present fairly the financial position, results of operations and changes in financial position in accordance with an appropriate disclosed basis of accounting, which except in special circumstances should be generally accepted accounting principles. The report should provide adequate explanation with respect to any reservation contained in such opinion.
   iv) Where an opinion is expressed, the report should also indicate whether the application of the disclosed basis of accounting is consistent with that of the preceding period. Where the basis or its application is not consistent, the report should provide adequate explanation of the nature and effect of the inconsistency.

15 Q. 4. **Approach:**

1. Determining the nature of the engagement:
   — Preferably in writing.
   — Objectives you wish to achieve.

2. System review:
   — Written or internal procedures.
   — Quality of such procedures.

3. Weaknesses and recommendations:
   — Significance of weaknesses.
   — Any idea of the money value of such weaknesses?
   — Are recommendations economical?

4. Client's comments.

5. Other questions raised.

Content of report:
— Covering letter.
— Engagement.
— Scope of work and approach.
— Recommendations.

Source: Lesson Notes 517-8 and 9.

Page 2 of 4

10 Q. 5. 1. **Accrual basis of accounting:**
Revenues are taken into account when earned, and expenditures are considered as such as soon as liabilities are incurred, regardless of cash flows.
Example: Fee to be paid by a municipality to its auditor.

2. **Cash basis of accounting:**
Revenues are accounted for when received in cash, and expenditures are taken into account when money is paid out.
Example: A government grant to a municipality.

3. **Modified cash basis of accounting:**
Expenditures are recorded as soon as liabilities are incurred even if they have not been paid, but revenues are not taken into account until collected in cash.
Example: Tickets issued by police.

Source: Lesson Notes 517, App. 4-II:6.

15 Q. 6.

ITEM NO.	BOOK VALUE	VALUE AS PER AUDIT	ERROR IN $	% OF ERROR
520	$ 34	$ 17	$ 17	50%
541	1,460	1,314	146	10%
1,376	430	215	215	50%
1,480	176	352	(176)	(100%)
715	20	0	20	100%
			$222	110%

a) Most probable error:

$370,000 x 1.10%	$4,070
Key items	(3,780)
High value items	(1,700)
	$(1,410)

b) Most probable error:

$\frac{\$222}{100}$ x 8,000 items =	$17,760
Key items	(3,780)
High value items	(1,700)
	$12,280

Sources: Lesson Notes 517-3:2; Principles of Auditing, p. 345.

Page 3 of 4

ANSWER SHEET

20	Q. 7.	1.	B
		2.	C
		3.	D
		4.	D
		5.	C
		6.	B
		7.	A
		8.	C
		9.	A
		10.	D
		11.	B
		12.	C
		13.	A
		14.	C
		15.	D
		16.	C
		17.	D
		18.	C
		19.	D
		20.	B
100			

END OF SOLUTIONS

CANADIAN CERTIFIED GENERAL ACCOUNTANTS' ASSOCIATION
AUDITING 517 EXAMINATION
JUNE 1980

MARKS — TIME: 3 HOURS

12 Q. 1. The Canadian Certified General Accountant's Association is striving to ensure that the National Code of Ethics is comprehensive and that all members are well acquainted with it and observe it scrupulously.

Required:

What are the objectives of the National Code of Ethics?

18 Q. 2. As a C.G.A., you were recently appointed auditor of Blank Company Limited. This audit engagement was offered to you by the Audit Committee of the Board of Directors at a meeting which you attended. You have communicated with the company's previous auditor and he, as is proper, has agreed to cooperate. Although you have not, as yet, visited the premises of the company, you agreed to perform the audit.

Required:

What are the points that you must consider or the activities that you must perform between the date of the audit engagement and the commencement of your audit work?

10 Q. 3. One of the main objectives of commercial accounting is the determination of net income. The degree of accuracy sought after is directly related to the quality of the matching of revenues and expenses. Depreciation is a means to ensure a better matching of revenues and expenses, since the cost of assets is distributed over the accounting periods during which those assets produce income.

Municipal accounting is totally different from commercial accounting. For example, depreciating the assets of a municipality is generally not considered to be an acceptable practice.

Required:

(a) State the various reasons why this municipal depreciation practice is justified and explain each one.

(b) State and explain two particular cases where depreciation is justified.

10 Q. 4. The materiality of the deficiencies, inconsistencies or disagreements will generally govern the type of opinion expressed by the auditor. In some cases, the auditor may decide that the existing deficiencies, inconsistencies or disagreements are insignificant and need not lead to any modification of his report. At the other extreme, he may decide that the existing deficiencies, inconsistencies or disagreements are so material that an adverse opinion or a denial of opinion is warranted. Between these two extremes, a qualification of opinion is required. (C.I.C.A. Handbook para. 5500.30).

Required:

State the circumstances which may prevent an auditor from giving an unqualified opinion on financial statements.

20 Q. 5. The main objectives of the auditing of the "bank" account are to assess the internal control on cash receipts and disbursements and attest to the fairness of presentation on financial statements.

Required:

a) List, and explain briefly, the steps of an auditor's work which enable him/her to assess a firm's internal control on its cash receipts and disbursements.

b) List, and explain briefly, the steps of an auditor's work which enable him/her to attest to the fairness or presentation of the "bank" account on financial statements.

15 Q. 6. Readers of unaudited financial statements often place some additional reliance on such statements because of the known involvement of a public accountant. Also the financial statements may, in many instances, provide information to creditors, investors, potential investors and others who may not have access to alternative information concerning the enterprise. Therfore, the public accountant provides a useful service when he undertakes a review of such financial statements. Even though the financial statements are not audited, generally acepted accounting principles consistently applied are applicable in their preparation.

In a review engagement, the public accountant's objectives, and accordingly his procedures, differ substantially from those in an audit engagement. (C.I.C.A. Handbook para. 8100.22 and .23)

Required:

State the professional standards that should be met by the public accountant in a review engagement.

15 Q. 7. An EDP department implies the development of specific procedures of internal and operational control.

Required:

State the areas or activities for which control procedures should be developed.

NOTE TO STUDENTS:

No marks will be given for a list of particular controls. The answer must identify the areas and/or activities which should be subject to control, without stating what particular controls would be used.

100

END OF EXAMINATION

CANADIAN CERTIFIED GENERAL ACCOUNTANTS' ASSOCIATION
AUDITING 517 EXAMINATION
JUNE, 1980
EXAMINER'S COMMENTS

Specific

Q.1 Many either knew or didn't know it. Many listed what was in the code of ethics rather than state the objectives of the code.

Q.2 Many are answering what they do *during* the audit rather than *before* the audit.

Q.3 Poorest question: part (a) not bad
(b) very poor

Q.5 Students did not seem to understand what was wanted. Many seemed to misinterpret the question. Many talked about presentation rather than verification.

CANADIAN CERTIFIED GENERAL ACCOUNTANTS' ASSOCIATION
AUDITING 517 EXAMINATION
JUNE 1980
SUGGESTED SOLUTIONS

MARKS

TIME: 3 HOURS

12 Q. 1. The objectives of the National Code of Ethics are as follows:

(1) to ensure that standard of behaviour which will be in the best interest of the public and the profession;

(2) to ensure that the client and the public know the extent of reliance that can be placed upon the work and reports of the Certified General Accountant;

(3) to enable those outside the profession to understand the value of services performed even though they are unable, in each individual case, to directly measure that value.

Source: 517-1:2

18 Q. 2 (1) Description of the client company: its structure, organization, operation, etc.

(2) What are the objectives of the audit? Is this a statutory audit, a special-purpose audit, etc.?

(3) What is the nature and the extent of the other services to be performed for the client? Do they, for example, include the preparation of tax returns?

(4) When is the audit work to begin and on what date is it scheduled to end? Within this period, each stage of the audit work is to be scheduled. In addition, it is necessary to determine what must be done before, on or after the balance sheet date, and to set dates for such critical procedures as cash counts, accounts receivable confirmations and inventory observation.

(5) What is the work to be done by the client's staff?

(6) Is our staff adequate both in quantity and competence for this engagement ?

(7) Determine target dates for completing major segments of the engagement, such as filings with the appropriate government agencies.

(8) Are there any special problems to be resolved in the course of the engagement?

Source: 571-2:1; Principles of Auditing, pp. 181 and ff.

10 Q. 3. (a) **Why capital assets are not subject to depreciation:**

(1) Taxpayers should not be charged twice for fixed assets. This would occur if both the depreciation and debt charge were recorded in the General Fund.

On the other hand, out of fairness to the present taxpayer, future generations should bear part of the cost of fixed assets. The ideal would be to have, where possible, those who will benefit from the creation of an asset bear the cost of that asset.

(2) Because of the cash budgeting process,depreciating assets would create a monetary surplus, which, for all intents and purposes, would be equivalent to making a profit. The purpose of a municipality, however, is not to make a profit but to provide services at the lowest possible cost. Furthermore, municipalities are not permitted to accumulate surpluses without a good reason: this would constitute a departure from the objective of a municipal corporation.

(3) As opposed to a commercial concern, the book value of assets (cost LESS accumulated depreciation) is of little value in the case of a municipality. It is advantageous, from a credit rating point of view, for a commercial enterprise to determine the book value of its assets but such is not the case for a municipality, whose credit rating is based not on the book value shown on the balance sheet of its various funds, but on its tax raising capabilities, which depends on the value of taxable assets.

(4) Unlike commercial accounting, municipal accounting does not call for an extensive matching of revenues and expenses. Thus, depreciating fixed assets is not necessary since, from an accounting point of view, such depreciation does not affect the net result (surplus or deficit).

(5) Likewise, because of the methods used by governments to finance the purchase of their fixed assets, the replacement of those assets does not call for depreciation.

(b) **Particular cases where depreciation is acceptable:**

There are a few particular cases where it is possible to depreciate fixed assets in municipal accounting:

(1) in the case of self-supporting operations resembling commercial enterprises. Depreciation is acceptable provided that no operational deficit should result. Such deficit would likely have to be offset with the taxpayer's money, which means that you would be doing indirectly what you wanted to avoid doing directly.

(2) in those cases where a municipality has created municipal departments whose function is to supply goods and services to other departments. Depreciation is then justified as a means of comparing the cost of those goods and services with bids from the private sector. The municipality will therefore be able to evaluate the costs of its operations.

Source: 517 Appendix 4-II:9

10 Q. 4. The circumstances which prevent an auditor from giving an unqualified opinion involve:

(a) auditing deficiencies, including:

(i) inability to obtain essential information, and
(ii) failure to adhere to generally accepted accounting principles;

(c) inconsistencies in the application of generally accepted accounting principles;

(d) disagreement on valuation;

(e) other matters which may have an effect on the fairness of the financial statements.

Source: 517-10; CICA Handbook, para. 5500.29

20 Q. 5. a) 1. Prepare a description of the internal control for cash.

2. Trace a sample of each major type of cash transaction through the system.

3. Prove footings of cash journals and trace postings to ledger accounts.

4. Compare detail of cash receipts listings to cash receipts journal, accounts receivable postings, and authenticated deposit slips.

5. Prepare bank reconciliations.

6. Verify cash transactions in one or more selected expense accounts.

7. Investigate any cheques payable to cash or to bearer.

8. Investigate any cheques representing large or unusual payments to related parties.

b) 1. Send confirmation letters to banks.

2. Count and list cash on hand.

3. Obtain or prepare reconciliations of bank accounts as of the balance sheet date.

a) Investigate N.S.F. cheques;
b) Investigate any cheques outstanding for more than 30 days.

4. Verify cutoff of cash receipts and cash disbursements.

5. Trace all bank transfers for last audit year and first week of following year.

Source: 517-8; Principles of Auditing pp. 438 - 456.

15 Q. 6. In all non-audit engagements, the public accountant should meet the following professional standards:

(a) ensure that the services are performed, and any accompanying communication is prepared, by a person or persons having adequate technical training and proficiency in accounting, and with due care;
and

(b) ensure that the work is adequately planned and properly executed and that, if assistants are employed, they are properly supervised.

When undertaking a review engagement, the public accountant should meet the following professional standards:

(a) possess or acquire the amount of knowledge of the business carried on by the enterprise that a public accountant should reasonably be expected to have so that he can make intelligent enquiry and assessment of information obtained;

(b) perform a review, consisting primarily of enquiry, comparison and discussion, with the limited objective of considering whether the information provided to him relative to the financial statements and the statements themselves are plausible in the circumstances.
Such a review does not require:
(i) a study or evaluation of internal controls;or
(ii) an examination of evidence as to representations made or information supplied to him, except where such representations or information are not plausible;

(c) determine, so far as he knows and based on information provided to him and the review carried out by him, whether the financial statements appear to be in accordance with generally accepted accounting principles (or in special circumstances the appropriate disclosed basis of accounting) consistently applied.

Source: 517-7; CICA Handbook, para. 8100.20 and 8100.27.

15 Q. 7

1. Access to computer room;
2. Library and file control standards;
3. Data-conversion standards;
4. Library procedures;
5. Operational control procedures (related to the scheduling and utilization of files and equipment);
6. Physical security of files and equipment;
7. Record reconstruction procedures;
8. Backup facilities and emergency procedures.

Source: 517-5:2; EDP, Controls and Auditing by Porter and Perry, P. 79.

100

END OF SOLUTIONS

CANADIAN CERTIFIED GENERAL ACCOUNTANTS' ASSOCIATION
PUBLIC ADMINISTRATION AND FINANCE 518 EXAMINATION
MARCH, 1980

MARKS TIME: 3 HOURS

Instructions:

Answer *two* questions in Part A and *two* questions in Part B. Four questions constitute a complete examination. All questions are of equal value (25 marks each).

PART A *(Answer two questions only)*

25 Q. 1.

(6) (a) What structural and administrative problems existed which led to the Glassco Commission?

(6) (b) Outline the structural and administrative changes made in the late 60's.

(13) (c) Relate these changes to the reforms recommended by the Glassco Commission.

25 Q. 2. **Each year the Government must decide how it will allocate any available incremental funds between competing projects and programs which are both new programs or improvements in the quality of existing ones.**

(7) (a) Outline the principal objectives of a government expenditure process at the federal level.

(18) (b) Outline the sequential steps of the budgetary process whereby priorities are translated into directions for resource allocation purposes at the federal level.

25 Q. 3.

(5) (a) What are the objectives of PPBS?

(10) (b) Briefly describe the P.P.B. System approach to budgeting.

(10) (c) Describe some of the difficulties of implementing this type of System.

PART B *(Answer two questions only)*

25 Q. 4. **A Public Good has been defined as a good which is not used up when consumed by one person and individuals cannot be excluded from the consumption of the good.**

(5) (a) Why cannot a private market be expected to adequately supply a public good?

(5) (b) What is the central problem that a government faces in supplying the public good?

(15) (c) Outline briefly how benefit-cost analysis may be used to solve this problem.

25 Q. 5. **It has been claimed that in recent decades in Canada the Public sector has grown in absolute and relative size.**

(6) (a) What has been the growth in the relative size of the Public sector in Canada in recent decades?

(6) (b) How have the shares of total expenditures changed in relation to the three levels of government?

(6) (c) How has the composition of spending elements changed?

(7) (d) The course discusses three theories presented to explain the growth in public expenditure — Wagner's Law, Displacement Hypothesis and Political-Bureaucratic Argument. Discuss and explain *two* of these.

25 Q. 6.

(3) (a) Define a conditional grant.

(12) (b) What is the rationale for the federal government to transfer revenues to the provinces in the form of *conditional* grants?

(10) (c) What arguments would you advance to support *and* refute the claim that conditional grants distort the provinces' priorities?

25 Q. 7. It can be said that policy instruments are substitutes for each other (although not perfect substitutes) and the government enters a "market for instruments" wherein they purchase instruments according to their cost. Discuss the cost factors a government would take into account where the policy options available include direct budgetary expenditures, preferential tax provisions and regulations.

100

END OF EXAMINATION

CANADIAN CERTIFIED GENERAL ACCOUNTANTS' ASSOCIATION
PUBLIC ADMINISTRATION AND FINANCE 518 EXAMINATION
MARCH, 1980
SUGGESTED SOLUTIONS

MARKS — TIME: 3 HOURS

PART A

25 Q. 1

(6) The basic rationale for both sets of changes should be given.

(i) The establishment of objectives and the development of policy were accomplished, before 1962, through a rather informal and personalized process involving the Cabinet and a small group of senior public servants.

(ii) Planning in government, accompanied by a planning structure to state explicit goals, was a rare phenomenon.

(iii) Financial managment in government relied on a pre-audit and centralized control of government disbursements by the Comptroller of the Treasury combined with post-audit through the office of the Auditor General.

(iv) The Treasury Board had the actual financial responsibility for government operations, but the law (proper drafting of the financial legislation) complicated matters by taking an undue long time before the Board was given this authority in law.

(v) Under a confused system of financial accountability the responsibilities of deputy ministers were somewhat limited by the powers of the central agencies. For example, personnel administration and all its financial implications were still under the powerful central control of the Civil Service Commission which was given these sweeping powers in the Civil Service Act of 1918.

(6) The structural changes brought about by Glassco and cabinet reorganization *aimed at making management more identifiable and rationalizing the administrative structure* to accomplish the following:

(i) the reduction of central control over government spending and personnel administration.

(ii) the delegation of authority and managerial responsibility to deputy ministers.

(iii) the creation of new central agency roles and structures.

(iv) the consolidation of common services in the government of Canada.

(13) What followed in terms of institutional changes were as follows:

(1) Establishment of Treasury Board as a central agency with its own minister, and the establishment of the Board as the "general manager" and employer of the public service.

(2) Alteration in the form of the annual Estimates, a reduction of the number of supply votes, adoption of a program base for the cost elements of each vote, and provision of more comparable and complete supporting information.

(3) The delegation to departments and agencies substantial responsibility and authority for financial management and personnel administration.

These recommendations led to:

(1) The Government Reorganization Act of 1966 separating the Treasury Board Secretariat from the Department of Finance.

(2) Amendments of the FAA (Financial Administration Act) and the Public Service Employment Act 1967 giving the Treasury Board the responsibility for central management. In 1969 further amendments to the FAA abolished the office of the Comptroller of the Treasury giving his pre-audit functions to the departments and the delegation of his powers to the Minister of Supply and Services (who then became the Receiver General of Canada).

(3) Cabinet changes revolved essentially along the lines of restructuring and enlarging the cabinet committee system and especially the new planning role of the Cabinet Committee on Priorities and Planning. (The development of governmental priorities that could be translated into guidelines for the departments to follow in preparing their annual budgets).

These structural changes had as their rationale the need to do something because of these two central facts:

(1) The strong and sustained economic upsurge throughout the 1960s and early 1970s led to the mistaken belief in government circles and elsewhere that economic growth would continue unabated and that as a consequence high levels of government spending could continue. Effective planning with respect to the use of total resources was woefully inadequate.

(2) Secondly, the institutional machinery of government had to be reshaped to give meaning to this new reality in planning and evaluation of programmes.

A drastic decentralization of authority was exercised by federal departments and agencies, subject to full accountability for the exercise of that authority in pursuit of clearly established responsibilities and objectives. For these reasons all the institutional changes had to be related to give meaning to the rationalization process.

25 Q. 2 "Each year the Government must decide how it will allocate any available incremental funds between competing projects and programs which are both new programs or improvements in the quality of existing ones."

(10) The literature has outlined the principal objectives of a government expenditure process:

(1) providing Cabinet with the means of directing the total pattern of government expenditures towards the overall goals or priorities of ministers. ·

(2) making sure that the allocation of resources to specific programs reflect these prioritites.

(3) ensuring that specific expenditure proposals will meet the government's priorities in the most efficient and effective manner available.

(4) providing for the evaluation of existing policies and programs to determine which are ineffective or of low priority and should be eliminated.

(5) ensuring, above all, that the allocation of resources to specific programs reflects these priorities.

(15) The three aspects of the budgetary process where by priorities are translated into directions for resource allocation purposes are as follows:

(A) PRIORITY SETTING

Effective "top-down" direction requires the statement of priorities, goals or objectives. However this is not easy because the political jprocess provides an input of numerous demands which are frequently contradictory or inconsistent, while political attitudes are often vague and ambivalent, further complicated in Canada because of the essentially pragmatic nature of Canadian political parties. Neither of the major political parties relies on strong philosophical party manifestos.

Priority Setting in broad terms have been attempted by the previous Liberal administration, usually on an annual basis. Further discussions are held within the government caucus, and in Cabinet and the Cabinet Committee on Priorities and Planning, resulting in a broad set of priorities, usually by December or January (See article by A.W. Johnson).

Specific impact of these priority exercises is to assist in determining the legislative program of the government, the Expenditure Budget, and areas where new policies may need to be developed or additional spending programs required. Principal manifestations of this exercise: the speech from the Throne at the opening of Parliament, the Main Estimates and Announcements, from time to time, by ministers of new policies and programs.

(B) EXPENDITURE PLANNING

This is outlined in A. W. Johnson's article. It covers a five year period (the approaching fiscal year; "target year" plus the next two years).

Planning usually begins twelve to eighteen months before the target fiscal year.

"A"; "B"; "X" Budgets.

"A" represents over 90% of total budgetary expenditures — fixed costs of government, such as statutory commitments and contracted and formula-based expenditures.

"B" represents most of remaining 10%

— "new" monies for new programs or enrichments
— monies held in reserve for allocation during the fiscal year, or to meet "over runs" in statutory commitments

"X" represents those programs slated for eradication.

(C) PROGRAM FORECAST AND REVIEW SYSTEM

This system is the one through which the government's expenditure planning is intended to have its impact. System produces the two main documents of expenditure process (1) Expenditure Budget and (2) the Main Estimates.

TB reviews the individual submissions and prepares a memorandum to Treasury Board Ministers recommending levels for specific expenditures. Final document in this exercise is known as the Expenditure Budget. The document is considered in the Priorities and Planning Committee, at which time the general levels of expenditures is established and problems ironed out.

The Main Estimates on the other hand, is the detailed annual expenditure plan of the government which is presented to Parliament in February of each year.

25 Q. 3
(5) (a) The components which make up the PPBS are as follows:

— statements of objectives
— the evaluation of program results as these results relate to objectives
— the computation of total system costs
— the assessment of alternative means of providing the same service or one which is an acceptable substitute — the integration of policy and program decisions with the budgetary process

(10) (b) It is essentially a systems process whereby an attempt is made to outline the central aims of strategic planning and the need for improvement in managerial efficiency and financial control. Evaluation is a crucial exercise in this whole process and is part of strategic planning.

Strategic planning includes the following:

(1) some forecasting of the changes in the indicators of goal achievement that would occur in the absence of changes in policy instruments.

(2) assignment of priorities by the ministers of government.

(3) identification of the policy instrument changes that might be used to meet these high-priority problems.

(4) assessment of the relative effectiveness of the policy instruments.

(5) selection by ministers of the changes in the policy instruments that would most effectively resolve the highest priority problems of the Government.

These set of objectives require highly sophisticated tools of measurement which as yet do not exist. It is not easy, for example, to analyse the cost effectiveness of government programmes in many instances particularly when the pre-eminent goal of "service efficiency" is stressed over everything else.

(3) (c) There is a danger of treating means as ends. We get so wrapped up in refining the tools for measurement that we do not see the forest for the trees.

(3) Moreover social indicators, a crucial variable in strategic planning, is at best, still crude. (See D. Hartle, "A proposed system of program and policy evaluation", p. 260).

(4) Finally we have not as yet resolved the problem in government of the major conflicts among individual goals so that the more complete realization of one goal will impose a cost in terms of the less adequate realization of other goals. The maximization of particular goals is not the objective of PPBS. Strategic planning must perfect tools to maximize *all* governmental goals so that ministers can make the hard decisions that are involved. (See Hartle, p. 265).

PART B

25 Q. 4

(5) (a) The major reason why a private market cannot supply a public good is because of the non-excludability problem. The nature of public goods is such that when the good is produced at all and made available to one person, it is automatically available to all other people, National Defence being the classic example. Thus, it is impossible to sell the good in a market because it is impossible to withhold consumption of the good from those who do not pay.

(5) (b) The central problem that the government faces in supplying a public good is that it has no demand signals available to it in deciding the optimal quantity of the public good. In a private market, consumers in offering various prices for various quantities (eg. the demand curve) automatically provide this information concerning the values that they place on marginal units of the good. Since there is no market in the case of the public good, this information is missing and there is no way that a government can easily obtain it.

(15) (c) Benefit-cost analysis may help to solve this problem because it is a decision making tool which helps the analyst to replicate the workings of an efficient market. That is, the benefit-cost rule of equating MB to MC is equivalent to the market rule of P = MC. In addition, B-C analysis provides us with a rational and logical framework to identify, list and evaluate the benefits and costs of a particular program or project. Because we are forced to identify the link between inputs (cost) and outputs (benefits), we are more likely to be sure of identifying all of these inputs and outputs and of approaching the task of evaluating them in some logical way. It should be recognized that B-C analysis does not completely resolve the problem of determining the value that consumers place on the public good, but that it may help us to estimate acceptable approximations of that value.

25 Q. 5

(6) (a) The first major development is the growth of the relative size of government in the Canadian economy. According to numbers provided by Strick, in 1926 government expenditures were 15.7% of GNP, and in 1976 they were 41.5%. Students would not be required to present these exact numbers, but they should indicate clearly that they know what the order of magnitude of the increase is.

(6) (b) The major development has been the growth of the relative size of provincial governments within the total public sector. Depending on which numbers one looks at, the increase may be in the order of doubling of its relative size. Again, the exact numbers are not important, but some notion of the order of magnitude is.

(6) (c) One trend is the increase in the portion of the budget at all levels of government devoted towards social welfare spending.

— A second trend is the increase in transfer payments as a percentage of the total budget, especially at the federal government level. These are transfer payments both to individuals and to other governments so that currently, transfer payments account for over ½ of the total federal budget.

(7) (d) Two explanations for the growth in the government. Here students may focus on any two of the three theories presented in the lesson, that is: 1) Wagner's Law; 2) the displacement hypothesis; and 3) the political-bureaucratic argument.

— Wagner's Law states that as incomes grow in industrialized nations, the relative size of the public sector will grow. He advanced three reasons for this: 1) the need for more protective services and administrative services due to increasing complexity and frictions in society; 2) the increasing demand for income elastic goods such as education and cultural activities; and 3) the increasing market failures that would require government interventions. The major criticism of Wagner's Law is that it is entirely demand oriented — it does not consider supply side factors at all. As well, the theory that it does present is much too general and imprecise to have strong explanatory or predictive powers.

— The displacement hypothesis. This is the argument that at any point in time, there is a general public perception as to the appropriate size of the public sector, but that during emergency periods such as war, public sector spending rises very quickly to a new higher plateau and then remains there after the end of the war, as social spending tends to displace the war spending. The major problem with this hypothesis is that it greatly over-simplifies reality and in fact, in Canada there have been major expansions in the public sector in "normal" times.

— Political-bureaucratic factor. This approach suggests that the activities of self-interested politicians and bureaucrats tends to expand the size of the public sector — politicians promising and delivering new programs in an attempt to secure votes and bureaucrats expanding their budgets and the size of their programs in pursuing their own self-interests. It is very difficult to evaluate how strong the factors are in this theory and it is also a theory that focuses almost entirely on the supply side of government and not the demand side.

MARKING NOTE:
Students may, in the end, conclude that all of the theories, or the two theories that they discussed, have something to contribute to the explanation but that neither in itself is a complete explanation. This would be an acceptable conclusion, but they should not be penalized if they do not reach this point at the end.

25 Q. 6

(3) (a) A conditional grant is one which is contingent upon specified provisions.

(12) (b) The rationale for federal transfers to the provinces in the form of conditional grants is that there are important externalities, or spill-overs, between provinces involving some of the services that provincial governments provide. Lesson 9 presents a discussion of how a province, in considering the benefits occurring only to its own citizens, will ignore the spill-over benefits going to citizens of other provinces and therefore, from a larger perspective, they will be supplying too little of the service in question. They would be supplying the service at a point where marginal benefits are greater than marginal costs. The federal government which presumably would recognize the spill-over and hold a view which encompassed the total population in all provinces, would provide conditional grants to the provinces to subsidize the costs of particular services, thereby reducing their marginal cost. Provinces would then equate marginal benefits as they saw them to their new subsidized marginal cost and if the extent of the subsidy was correctly determined, would reach a new quantity of service that was efficient from the larger social perspective. Figure 9-1 in Lesson 9 may be reproduced as part of the answer. If this is done, the student should refer to the diagram in the course of their discussion and not just present it and then ignore it.

(10) (c) One approach to the second part of the question is to say that distorting priorities is precisely the intention of the federal government in offering conditional grants. When we argue that the provinces provide insufficient quantities of the goods and services involving spill-overs, what we are saying precisely is that their priorities are wrong and lead to inefficiencies and therefore the purpose of the grants is to induce them to change their priorities so that the quantities of services they provide are more optimal.

— the other side of this argument would be that the externality spill-over argument is over-stated and that the provinces are large enough that in most cases there are not meaningful or significant externalities spilling over their borders to other provinces. If this was the case, then there would be no strong argument for federal government intervention in the form of conditional grants.

— Another argument that may be made is that the federal government attaches conditional grants to various services in order to ensure that there are national uniform standards involving such areas as Medicare. However, it is not clear that national standards in some areas are either necessary or beneficial and there may be less stringent ways for the federal government to guarantee such things as interprovincial portability of programs without attaching national standards.

25 Q. 7 Basically, this question requires the students to discuss the idea that policy instruments are substitutes for each other (although not perfect substitutes) and that the government, in effect, enters a "market for instruments" wherein they purchase the various instruments according to their costs. The costs involved here are financial, economic and political. Students should recognize all three components of cost. In this context then, we can view the government as choosing those instruments which have the lowest costs associated with them.

— Budgetary expenditures would involve obvious financial and economic costs and as well political costs such as the possible public aversion to increase government spending and public concern over the size of the budgetary deficit.

— Preferential tax provisions, or tax expenditures, as they are called in Lesson 10, would have similar economic costs and even similar budgetary deficit implications. However, their financial costs are largely hidden since they do not enter the government's accounts and largely for that reason their political costs tend to be lower. The government can grant special preferential treatments to certain groups while the costs of this preferential treatment remain largely hidden or unrealized by the population as a whole.

— Regulation. Here the direct financial and economic costs to the government are minimal. Relatively speaking, the operation of a regulatory agency is cheap. However, the regulation may involve substantial costs being imposed on the private economy. Again, similar to tax expenditures, regulation tends to be politically attractive because its implications and costs are hidden and often it is extremely difficult to sort out who is benefitting and who is being hurt because of the operation of a particular regulatory agency.

— Students may also recognize that the technology of the problem and the technology of the various instruments may have a significant impact on the decision of the government. In other words, one instrument may inherently be a more effective instrument for handling a particular problem than any of its other alternatives. In this case, the degree of substitutability is quite low.

— Finally, the students may decide to discuss these issues by focussing on a particular policy problem where choice is involved or discuss them in more general terms as is done above. Either would be acceptable and students would not be required to reach any definite conclusions in their answer so long as they are able to intelligently discuss the types of factors that were to be involved in the decision. Indeed, if the discussion was to be in general terms, the reaching of a definite conclusion would be impossible.

<u>100</u> END OF SOLUTIONS

CANADIAN CERTIFIED GENERAL ACCOUNTANTS' ASSOCIATION

PUBLIC ADMINISTRATION AND FINANCE 518 EXAMINATION

JUNE, 1980

Instructions: Answer **2** questions from **Part A** *and* **2** questions from **Part B.** Four questions constitute a complete exam. All questions are of equal value (25 points each).

Marks

Time: 3 Hours

Part A

25 Q. 1.

(5) a) What is the public expenditure problem that benefit-cost analysis is most directly intended to solve?

(15) b) Outline the benefit-cost analysis process and how this process is designed to handle this central problem.

(5) c) What other public expenditure problem does benefit-cost analysis handle less satisfactorily? Why?

25 Q. 2.

(15) a) What effects on public sector decision making might we expect to flow from an effective freedom of information law?

(10) b) If there are fairly broad categories of exceptions written into the law, what response would you predict on the part of the bureaucracy?

25 Q. 3. To the extent that the provincial governments gain some control over the public services that the federal government now delivers, what are the likely consequences of this movement in terms of the pattern (type, orientation, quantity) of public services we receive?

25 Q. 4. Discuss the likely distributive and allocational effects of excise taxes on alcoholic beverages and the general sales taxes that are levied by the provinces.

Part B

25 Q. 5. Outline the expenditure planning process of the Government of Canada. What are the basic Lambert recommendations to improve this process?

25 Q. 6. A personnel management framework in the public sector has many fundamental differences to one in the private sector particularly in regards to collective bargaining. Discuss these collective bargaining differences in the public sector.

25 Q. 7. Make the distinction between efficiency vs. effectiveness.

100

END OF EXAMINATION

Page 1 of 1

CANADIAN CERTIFIED GENERAL ACCOUNTANTS' ASSOCIATION

PUBLIC ADMINISTRATION AND FINANCE 518 EXAMINATION
JUNE, 1980

SAMPLE SOLUTIONS

Marks **Time: 3 Hours**

Part A

25 Q. 1.

(5) a) There are a number of problems or goal areas in public expenditure analysis that can be identified. For example, the stabilization goal, the redistributive goal and the allocational goal. Of these, it is the achievement of efficient resource allocation that benefit-cost analysis is primarily directed towards.

(15) b) The benefit-cost process involves three main steps or procedures. The first is to clearly identify the objectives of the proposed expenditure project and all relevant alternatives to that project. Second is the identification and estimation of costs and benefits associated with each of the investment alternatives. This is the crucial analytical component of a benefit-cost analysis. Essentially what is involved is the construction of a model that will relate the inputs (costs) to the true outputs (benefits) of the project or program under analysis. The model must be able to distinguish those benefits which are directly attributable to the project from those benefits that would have occurred in any event. It must also include all opportunity costs of the project under consideration. In some cases these costs extend considerably beyond the direct money costs of the inputs in the project. Another problem is the difficulty in expressing some of the benefits and costs in dollar terms or beyond that, even quantifying these benefits as costs at all. The most useful benefit-cost analyses are those that push this quantification as far as it can possibly go. When this occurs we are able to compare as many dimensions of one project as possible against those of another project. The third major step is to determine and calculate the relevant decision indicators. In particular, if we are to solve the allocational efficiency problem, then we must select the scale of a project at which marginal benefits equal marginal costs. If we stop before this point, then the project is too small in the sense that another dollar of cost would yield more than a dollar's worth of benefits. And if we go beyond this point the project is too large in the sense that another dollar's worth of costs would yield less than one dollar's worth of benefits. Therefore, the optimal scale, or the efficient point occurs where MB = MC.

(5) c) Another public expenditure problem that benefit-cost analysis handles less satisfactorily is that of distribution. The reason for this essentially is that we cannot specify any clear-cut distributional goals in the same way that we are able to specify a clear rule for allocational efficiency. This is because it is difficult, if not impossible, to make comparisons between individuals in reference to their incomes and also because notions of equity essentially are value judgements and therefore we cannot design any objective criteria for a distributive or equity goal.

25 Q. 2.

(15) a) The central point of the first part of this question revolves around the question of incentives facing the bureaucracy. The current system places a shield between the bureaucracy and the general public, and to some extent, even between the bureaucrats and their political masters. The shield also works to protect the politicians from the general public. Because they are able to operate behind this shield, the bureaucracy is able to do a number of things that they otherwise might find impossible. For example, the current system allows the bureaucracy to regulate the flow of information to the politicians and to the general public. Thus they are able to control what information is released, how it is released, and to whom it is released.

A law that effectively removed this shield from the bureaucracy would fundamentally change the incentive system within which it functioned. The fact that a good deal of information would be potentially available to members of Parliament (especially opposition members), journalists, academics, and various interest groups would effectively remove some power from the bureaucracy. The bureaucracy would thus function in a more open system and be more sensitive to the inputs and expected reactions or positions of the various constituencies they serve.

(10) b) Broad categories of exceptions would, of course, allow the bureaucracy the opportunity to maintain the existing system. The response that we could then predict would be one of attempting to include as much of their activities as possible within the categories of exceptions, thereby, in the extreme, emasculating the legislation.

25 Q. 3. To the extent that the provincial governments gain some control over the public services that the federal government now delivers (this may range from the actual transferring of jurisdiction to the provinces to a more modest recognition of provincial concerns and opinions) we could expect to observe a greater degree of heterogeneity in the pattern of services from province to province than is presently the case. Populations within a region, in some respects, tend to be more homogeneous than across the country as a whole. Therefore, if the regional governments respond to the demands of their constituents, we would expect that the pattern of services provided would more closely match the needs of the regional population than would a single national program.

At the same time we may find that the problems of spillovers between jurisdictions become more serious. Similarly we may find that the costs of certain services will rise because there may be some sacrificing of economies of scale. This point should not be over-emphasized. It is a possibility, but not likely a factor of major significance.

We might also expect to see the federal government play an even greater role than it does now as a conduit of funds serving as a tax collector from the population as a whole and through one program or another transferring these funds to the provinces for the provision of various public services.

In terms of the quantity of particular services delivered there is no *a priori* reason to expect either an increase or a decrease. Competition among the provinces to provide better levels of particular services may lead to an increase in overall quantities, but this is by no means obvious and would depend crucially on a number of factors such as the nature and the size of federal government funding and the interprovincial mobility of the population.

25 Q. 4. The allocative effects of an excise tax on alcoholic beverages could be analyzed in terms of Figure 10-1 in Lesson 10. That analysis would likely indicate that the effect would be a higher price and a smaller quantity of alcoholic beverages being produced and sold than would be the case without the tax. The more inelastic the demand for alcohol then the more of the tax would be passed forward to consumers in the form of higher prices and the less would be the effect on the quantity bought and sold. Students might argue that the demand for alcoholic beverages is quite inelastic and therefore we would observe a relatively small effect on quantity and most of the tax being passed forward to consumers, although they need not make this point to get full marks for the question. The distributive consequences of the tax would be shared between consumers of alcoholic beverages and producers, depending upon how much of the tax was passed forward in the form of higher prices, and how much the net of tax price of the producers declined. The income distribution consequences of the tax portion passed forward to consumers is likely to be somewhat regressive since this portion of the tax would be allocated in proportion to consumption and consumption does not generally increase with income levels. The portion of the tax borne by producers is likely to have a progressive impact since most owners of capital tend to be of higher income than the general population.

The allocative effects of general sales taxes levied by the provinces are likely to be of two sorts. 1) If there are particular commodities (eg. food) that are excluded from the tax, there is likely to be some reallocation of purchases away from taxed commodities towards those that are not taxed. 2) The taxes may have a more general allocative affect in that they will tend to discourage consumption in favour of saving and investment since the taxes for the most part are levied generally on most consumption expenditures. However, since the level of these taxes is relatively small, the size of both of these reallocational effects are likely to be minimal. In terms of distributive effects, the general sales taxes are likely regressive. As incomes rise, general consumption expenditures tend to increase more slowly, and therefore a tax on consumption, such as the general sales tax will tend to have a relatively greater burden for lower income than higher income groups, hence the tax will be regressive.

Students who use the terms "regressive", "progressive", and "proportional" need not define what the terms mean, but should clearly indicate by their use that they are aware of their meaning.

Part B

25 Q. 5. Each year government must decide how it will allocate available incremental funds between competing projects and programs which are both new programs or improvements in the quality of existing ones.

Objectives of government expenditure process:
— provide Cabinet with means of directing total pattern of government expenditures.
— ensuring that allocation of resources to specific programs reflects these priorities.

Composed of three steps:

I **Priority Setting** — held in the Cabinet and the Cabinet committee on Priorities and Planning resulting in a broad set of priorities — usually December or January.

This exercise — to assist in determining the legislative program of the government, the Expenditure Budget, and the areas where new policies may need to be developed or additional spending programs required. (Principal manifestation of this exercise — Speech from the Throne, the Main Estimates and the announcements by ministers of new policies and programs).

II **Expenditure Planning**
— Main way of ensuring that government resources are allocated in accordance with its priorities.
— Usually covers a five year period. (the approaching target year plus the next four years)
— Usually begins some twelve to eighteen months before the target fiscal year. (Planning for 1979-80 expenditures which became effective April 1, 1979 began early in 1978. To complete one cycle in preparing and carrying through an entire expenditure plan, as outlined in the Main Estimates requires about two and one half years.

Key documents here: *Expenditure Budget* and the *Main Estimates*.

Expenditure Budget: ''A'' Budget; ''B'' Budget; ''X'' Budget.

''A'' Budget represents over 90% of total budgetary expenditures — the fixed costs of government.

''B'' Budget remaining 10%. Usually divided into two, one half being allocated immediately for new programs or enrichments and the other half being held in reserve for allocation for the fiscal year or to meet ''over-runs'' in statutory commitments.

''X'' — the budget indicating those programs that are expendable and savings resulting.

III **Program Forecasts and Review**

- During April/May the Treasury Board Secretariat reviews the forecasts and makes recommendations about levels of expenditures to Treasury Board Ministers.
- Treasury Board then prepares the Expenditure Budget for discussion by Cabinet in July (ten months before the target fiscal year begins).
- Departments then submit their detailed estimates to the Treasury Board by the Fall. There, these estimates are compiled along with any further resource allocation decisions approved by Cabinet since July. Draft of Main Estimates by the end of November.
- Main Estimates sent for printing in December and tabled in the House of Commons, *by law* in mid-February where it is reviewed by the relevant parliamentary committees. New fiscal year begins April 1. Interim Supply (approximately one-quarter of the Estimates) must be approved by the end of March and the rest of the review can last well into the fiscal year (up to June).

Lambert criticized:

Lack of fiscal plan by the Government of Canada — a managerial commitment to the achievement of government.

Such a fiscal plan involves three steps:
- There must be a fiscal framework.
- There must be preliminary program forecasts by departments and agencies for the next three years.
- these must be put in step with the preparation of the Estimates and the Budget.

When the fiscal framework goes to the Cabinet committee on Priorities and Planning (in the Priority Setting Stage) there must be a consideration of *both* aspects of the expenditure, i.e., total levels of expenditure with an indication of priorities and levels of expenditure to be allocated to each department. Timing is also wrong (in the program forecast and review stage) since departments and agencies first learn of the fiscal framework when they are in the final stages of preparing their program forecasts for the Treasury Board. As a result departments and agencies make proposals without an upper limit. They cannot plan realistically and are not required to make hard choices.

25 Q. 6. There are differences:

Distinction at the highest level in government organization. In the public service the concept of management must include the political heads of departments (ministers of the Crown). The deputy minister is not the only top management official in the department ''where the truck stops.''

The profit motive leads to differences in outlook of personnel directors in private firms (Dondell, pp. 212-213).

Different motive for the public sector because of the political criteria. (Dowdell, p. 213) — the public interest

— Thus in managing personnel government cannot afford to let all public servants have the right to strike. Some essential services are refused this right and must settle for binding arbitration.

— Some issues are precluded by law from negotiations. (terms and conditions of employment as job security, classification and superannuation) See Kuravilla, p. 241.

— The bargaining process is much more structured. Requirements stipulate that public servants must choose either conciliation-strike or arbitration before bargaining begins and that the method chosen must remain in effect until it is changed before the next round of bargaining begins (p. 242).

A.W. Johnson ''Efficiency in Government and Business'' in Kernaghan *Public Administration in Canada 150-163*.

25 Q. 7. Efficiency is really proper resource allocation.

Studies on the potential market (p. 152)
Feasibility studies determining the economics of an enterprise. (plant location, transportation costs etc.)

"Administrative efficiency" is largely concerned with proper resource allocation: good organization, efficient procedures, effective financial control, proper inventory control etc. (p. 153) and elaboration of this theme (p. 155-157).

"Policy efficiency" in Johnson's terms is really effectiveness. (we have built in here both his concepts of policy efficiency and service efficiency). How well are the programs satisfying the needs and desires of the citizens in a particular region or in Canada as a whole?

"Administrative efficiency" assumes a number of criteria:
I The right product being produced.
II The market for the product exists or can be developed.
III The organization (plant) is properly located.
IV The technology of production being used is appropriate.

The making of the "right policy" or effectiveness of policy is above all this. Administrative efficiency is the means to an end — sometimes a wrong end. The making of the right policy decisions is pre-eminent political judgement — an exercise in *effectiveness*.

One must consider that public policy must not be measured in economic terms alone. Equally it must be measured in terms of the effectiveness with which it provides public services within the context of constitutional government (Elaborate on This Theme p. 154).

Elaboration of policy efficiency theme pp. 157-158.

Is there a valid distinction to be made between administrative efficiency and policy and service efficiency? (lumped under the general effectiveness in this question).

In part answers, Johnson summarizes his argument that the methods by which an "efficiency motivation" is institutionalized in the civil service are not too dissimilar from those used in private business (pp. 159-162).

But

Geographical decentralization of government organization makes some problems unique to public administration (p. 162-163).

More frequently there is a conflict in government between efficiency and effectiveness. (p. 163)

100 END OF SOLUTIONS

CANADIAN CERTIFIED GENERAL ACCOUNTANTS' ASSOCIATION

ADVANCED FINANCE 526 EXAMINATION

MARCH, 1980

Marks

Time: 3 Hours

Note: 1. Tables for the "Present Value of $1 and for the "Present Worth of an Annuity of $1" are attached.
2. Cases attached: Prairie Land Holdings and The National Rubber and Chemical Company.
3. Show **all relevant** calculations.

20 Q. 1. The Wholesale Company which has been selling only for cash is planning to switch to selling on credit and is considering offering terms of either net 30 or net 60. The following estimates of expected annual sales under the three alternatives has been developed.

Probability of Annual Sales

Units (x 000)	0	1	2	3	4	5	6	7	8	9
Cash	.06	.08	.15	.30	.20	.10	.05	.03	.02	.01
Net 30	.05	.07	.10	.15	.33	.10	.08	.06	.04	.02
Net 60	.04	.06	.08	.13	.30	.15	.09	.07	.05	.03

Expected Collection Period

Net 30	60% at 30 days; 40% at 60 days
Net 60	70% at 60 days; 30% at 90 days

Variable cost per unit is $1.75 and Selling Price is $3.00. Average inventory is equal to 50¢ per unit of annual sales. The company's cost of capital is 12%. Assume a 360 day year.
What decision should the company make with respect to offering credit terms?

12 Q. 2.

(8) (a) Describe the various motives giving rise to business combinations.

(4) (b) What is meant by "phantasmic growth" through mergers and what are likely to be its ultimate consequences?

34 Q. 3. Case: PRAIRIE LAND HOLDINGS (attached)

Assume you are Mr. Bailey. Analyze the past operations of the company, evaluate the various shareholder proposals, suggest other possible options and prepare a proposal for submission to the annual general meeting.

34 Q. 4. Case: THE NATIONAL RUBBER AND CHEMICAL COMPANY (attached)

(6) (a) What role can payback appropriately play in the capital budgeting decision?

(28) (b) What should Ms. Morgan recommend and why? Assume straight line depreciation in your calculations.

100

END OF EXAMINATION

PAGE 1 OF 1

Prairie Land Holdings

Founded as a family business in 1946, Prairie Land grew very rapidly, first through land development activity and subsequently through oil and gas discoveries on its properties. In 1958, the corporation issued common shares to the public and by 1960 its shares were listed for trading on two major stock exchanges. Public offerings were made from time to time to finance exploration and development while long-term debt was issued with some regularity from 1960 onward. In late 1975 the Bailey family had working-control through its 25 percent holding of voting shares. The remaining shares were widely distributed with no other large blocks of holdings in existence. Further diversification of business activity was also taking place.

During 1975, the flow of letters from irate shareholders complaining about Prairie Lands' policy of paying only token cash dividends over the past five years increased significantly. The anger, no doubt, was precipitated by recent declines in share prices, as well as by prevailing rates of inflation. It became very apparent to Mr. Stewart Bailey, the firm's chief operating officer, that the issue of dividend policy would dominate discussion from the floor at the shareholders' annual general meeting now just three months away. Bailey was also concerned about some recent heavy trading activity in Prairie Land shares and wondered whether it was the prelude to a formal tender offer for Prairie Land stock. Members of the Bailey family had been approached in the past about selling their holdings, but only in a very casual way. Obviously, if shareholder unrest increased, it would become most difficult to resist a tender offer which aimed at control of the company.

Many of the letters from shareholders pointed to low dividends combined with significantly higher executive compensation including generous pension plans. Others noted the decline in share prices relative to book values and urged higher cash dividends, stock dividends, stock splits, and more recently, share repurchases. Declines in share prices were slightly more severe than those experienced by similar firms and the market generally. Bailey felt that despite the unattractiveness of several of these ideas to his family, whose members faced very high marginal tax rates, he would have to come up with a proposal regarding dividend policy in time for the annual general meeting. He was also aware of the firm's significant investment and expansion opportunities which would require additional security issues over the next several years.

EXHIBIT 1

Prairie Land Holdings
Financial Data, Selected Years

	EPS	Dividends/Share	Average MP/Share	Book Value/Share*
1974	$16.00	$0.30	$176.00	$198.00
1973	15.00	0.30	180.00	182.00
1972	14.50	0.30	290.00	167.00
1971	13.00	0.30	230.00	153.00
1970	12.00	0.30	180.00	136.00
1965	9.00	0.25	108.00	76.00
1960	4.00	0	41.00	39.00

EXHIBIT 2

Prairie Land Holdings,
Selected Balance Sheet
Data as at year ended December 31,
(in millions of dollars)

	1974	1973	1972	1971	1970
Cash and marketable securities	61	50	45	38	30
Accounts receivable	31	30	16	15	14
Inventories	44	40	19	18	16
Total current assets	136	120	80	71	60
* Net fixed assets	662	655	527	505	443
Total assets	798	775	607	576	503
Current liabilities	217	220	123	115	105
Long-term liabilities	185	190	150	155	140
Common Shareholders' equity	396	365	334	306	258
Total liabilities and net worth	798	775	607	576	503

* No reappraisals of land values or oil and gas reserves had been undertaken since 1950

THE NATIONAL RUBBER AND CHEMICAL COMPANY

The Policy and Appropriations Committee of The National Rubber and Chemical Company met in the fall of 1976 to plan capital budget and expenditure plans for 1977. Recently, demand has been exceptionally strong for most of the company's products, and the industry as a whole has been suffering from undercapacity. Backlogs rose steadily and prices have been raised several times during the past two years in order to help stem the tide of demand, as well as to cover rising costs.

The Policy and Appropriations Committee, composed of the presidents of the company's four divisions, the chairman of the board, the vice president and treasurer and the controller, had as their goal to compile for consideration all the company's major capital expenditure requests and to determine their priority from a financial as well as market viewpoint.

After considerable debate as to the firm's overall goals and long-run objectives, the committee narrowed the major proposals down to four—one from each division. Their task now was to compile and analyze the data, as well as to apply appropriate capital budgeting techniques in order to evaluate each project. Chairman of the Board Warren assigned Gloria Morgan, the company treasurer, the job of reviewing and bringing her recommendations with respect to these projects to the committee. Morgan's analysis was expected to be based on sound financial management techniques.

Upon returning to her office, Morgan began reviewing the four projects and the data as presented in Table 20.1.

TABLE 20.1 Major Capital Proposals

Proposal A.	Expansion of the chemical division manufacturing facility.
Proposal B.	Purchase of additional assembly line equipment for the tire division.
Proposal C.	Additional warehouse space in Amsterdam to facilitate greater flexibility in delivery to the international markets.
Proposal D.	Installation of a computer to streamline the billing, receivables, and payables operation presently being performed by hand.

Table 20.2 outlines the cost of each project along with the net profit before tax over its estimated useful life in the absence of salvage value. The company is in the 50 percent tax bracket and all four proposals' depreciation would be calculated on a straight line basis.

On the basis of pro forma cash flow statements for the coming year, the committee projected that $14 million would be available for major capital investments from internally generated sources (depreciation and retained earnings). The committee felt that external funds were too costly at the time and, therefore, would not be available for capital expenditures.

Morgan felt that each of the four projects would benefit the company's future growth and stability. The chemical division was certainly losing sales because of inadequate production facilities; the radial tire was gaining in popularity and National should make every effort to maintain a share of this market; foreign markets were extremely important to National and additional warehouse space was needed to continue efficient operations; and the computer system was a long overdue project that should reduce labor costs and increase efficiency.

TABLE 20.2 National Rubber and Chemical Company

Project	*Cost*	*Year(s)*	*Yearly NEBDT*[a]
A	$6 million	1–30	$1,100,000
B	5 million	1–20	960,000
C	3 million	1–30	600,000
D	2 million	1	(200,000)
		2	800,000
		3	1,000,000
		4	1,000,000
		5	1,800,000

[a] Net earnings before depreciation and taxes.

TABLE 20.3 Comparative Company Analysis, Capital Expenditures (As a Percentage of Gross Plant)

Year	*Firestone*	*National*	*Goodrich*	*Goodyear*
1973	13.6	6.8	8.4	9.9
1972	10.6	5.9	6.9	11.0
1971	9.0	4.2	6.9	9.8
1970	13.4	7.9	8.7	11.3
1969	12.1	9.2	12.7	12.7
1968	16.1	10.4	12.8	12.9
1967	13.1	8.8	12.5	10.8
1966	13.1	11.5	13.7	12.9
1965	14.8	7.1	10.5	12.2
1964	9.6	6.3	8.2	9.2

Morgan wasn't quite sure which capital budgeting technique she should use to present her analysis to the committee. She knew that at least two members advocated the payback method and would not be receptive to any other method. However, projects A, B, and C are long-lived investments and could not be properly evaluated using the payback method.

The net present value method would consider casn flows throughout the life of each project and also the time value of money. A 10-percent discount rate for evaluating capital expenditure proposals was believed to be the best estimate of the firm's cost of capital. Morgan decided also to use the internal rate of return method in presenting her analysis to the committee.

To complete the analysis, Morgan obtained historical data from the annual reports of similar firms in the industry in order to contrast National's capital expenditures with those of the other firms. Table 20.3 contains this data.

CANADIAN CERTIFIED GENERAL ACCOUNTANTS' ASSOCIATION
ADVANCED FINANCE 526 EXAMINATION
MARCH, 1980
EXAMINER'S COMMENTS

Specific

Q.1 Generally very well done.

Q.2 (a) Other reasons given were to obtain a stock exchange listing and to acquire assets more cheaply than they can be constructed currently.

It is horizontal mergers that typically produce economies of scale in manufacturing but any type might yield economies of scale in financing. Combining businesses with different seasonal patterns (e.g., the classic coal ice businesses) to get year round utilization of some personnel and facilities is rather different from bringing together businesses with different cyclical patterns where some stabilization of earnings is sought without any integration of operations.

(b) It must be the firm with the high P/E ratio which aquires the firm with the low ratio. EPS rises and so does the share price if the acquirer's P/E ratio is maintained. But that is only justified if the earnings of the acquired firm can be made to rise as rapidly as those of the acquirer. Of course that is what the promoters claim but if it does not happen then the share price will decline producing a lower P/E consistent with the slower growth rate. EPS need not decline - it will probably continue to rise but at a slower rate.

Q.3 Summarizing the facts given is not analysis and is hardly necessary or useful with a short case. Determining the EPS in 1974 was four times the 1960 figure is not useful analysis. It actually misleads since most candidates then referred to tremendous increases. Yet when one does a proper compound annual growth rate for different periods one finds that only from 1960 to 1965 was growth rapid. Since then it has only been in the 6% to 7% range which is hardly indicative of a growth stock. Either the decline in the P/E ratio is justified or reported earnings do not fully reflect increasing value; the latter is quite possible with a land development and petroleum exploration company.

Strangely many candidates who were reluctant to raise dividends significantly thought share repurchase would be good idea. Yet, given the current negligible payout, dividends could be quintupled and still be less than 10% of earnings requiring only $3 million a year. Share repurchase to give the Baileys 50+% would require about $100 million. The dividend increase would require only a very modest reduction in the rate of expansion. Any increase in EPS as a result of repurchase would be at the expense of reduced earnings from reinvestment.

Although the Baileys would obviously prefer capital gains to dividends they must adapt to a situation where they lack absolute control and their outside shareholders are unhappy. Simply telling them that everything is being done in their best interest will not likely satisfy them since the available evidence does not support that position. What they see is negligible dividends, declining share prices and a management taking care of themselves with present and deferred compensation. Actions rather than assurances are required.

An interesting suggestion was to offer the shareholders the right to exchange their shares for preferred thus possibly satisfying those who wanted dividends. If limited to one third of the outsider's shares that would be sufficient to give the Bailey's firm control and the dividend cost (assuming 6%) would be about $6 million - only 20% of current earnings. (Offering existing shareholders the right to BUY preferred would not seem to have merit.)

Since short-term debt is being used to finance long-term assets the total debt to equity ratio (which is relatively stable) is probably more relevant than the long-term debt to equity which has been declining. The increasing use of short-term debt is, of course, very significant. Although retained earnings are a somewhat cheaper source of capital than new common equity issues, debt is still cheaper due to the tax treatment of interest.

Another explanation for stock splits increasing demand for the shares is that it reduces the investment required for a round lot and thus makes the stock more attractive to traders.

Q.4 (a) Saying that 'payback' is the time required to get one's money back is simply a description of what it is; not a explanation of the role it could play in capital budgeting decisions. And the simple statement that 'it is a criterion to be met' is hardly informative by itself.

(b) While simple errors of arithmetic can generally be ignored there are a number of circumstances - all illustrated in answers to this question - where they can lead indirectly to a serious loss of marks.

Sometimes candidates apparently combine a number of operations in their calculators and fail to adequately describe what they are doing. It may then be impossible to distinguish errors of arithmetic from errors of method.

This case was designed to raise the issue of capital rationing. Errors which produced negative NPVs at the cost of capital eliminated the capital rationing issue.

Arithmetic errors which produce results which candidates should be expected to recognize as impossible will lead to loss of marks at least where the impossibility or inconsistency is not recognized. Many who obtained a positive NPV for a project obtained an IRR below the discount rate used; and then tried to recommend choices on the basis of such irrational results!

Many did not handle the first year loss in D properly with respect to taxes. There should be a tax benefit since the Company is profitable and presumably it should occur in the year of the loss (or possibly the following year).

CANADIAN CERTIFIED GENERAL ACCOUNTANTS' ASSOCIATION

ADVANCED FINANCE 526 EXAMINATION

MARCH, 1980

SUGGESTED SOLUTIONS

Marks **Time: 3 Hours**

20 Q. 1. **ref. Lesson 10 & L. & S. Ch. 25**

The estimated demand in units for each alternative is

Cash	3,340
net 30	3,940
net 60	4,260

To evaluate going to net 30 we calculate the increase in margin: (3,940 − 3,340) × ($3.00 − $1.75) = $750

Inventory is increased by (3,940 − 3,340) × 50¢ = $300

Receivables become

$3{,}940 \times \$3.00 \times 0.6 \times \frac{30}{360}$	=	$591	
$3{,}940 \times \$3.00 \times 0.4 \times \frac{60}{360}$	=	$788	$1,379
Increase in investment			$1,679
Cost @ 12%	=		$ 201

Since the gain at $750 exceeds the cost at 12% of $201 going to net 30 is desirable.

Comparable calculation for going from net 30 to net 60 give the following results.

Increase in margin		= $400
Increase in inventory	$ 160	
Increase in receivables	$1,071	
Increase in investment	$1,231	
Increase in costs at 12%		= $148

Since the gain at $400 exceeds the cost of $148 then going to net 60 is justified. Thus,Company should choose net 60.

Some would argue that the appropriate investment in accounts receivable is their cost of goods sold of $1.75 rather than their selling price of $3.00. However,since this would reduce costs in both cases,the decisions would not be changed.

If one follows the procedure illustrated by Marrah in Lesson 10 one could present value the revenue to adjust for the delay in payment. The discount rate would be 1% a month (12% per year). Calculations are as follows:

Margin	at net 30		
	3,940 × ($2.97* − $1.75) × 0.6	=	$2,884
	3,940 × ($2.94 − $1.75) × 0.4	=	$1,875
	Total		$4,759
Margin on cash sales			
	3,340 × ($3.00 − $1.75)	=	$4,175
	Increase		584
Less 12% cost of inventory increase of $160			36
	Net gain		$548

$548 compares with $549 ($750 − $201) in the first method.

*$3.00 × 0.99 = $2.97 where 0.99 is the PV of $1.00 received at the end of the month when money costs 12% per year.

12 Q. 2. **ref. Lesson 8 and L. & S. Ch. 28**

(8) (a) Economies of scale may be obtained in production and marketing. Large firms usually have better access to financial markets. Diversification may reduce the variability of profits due to cyclical fluctuations and reduces the risk of new ventures (since they are relatively less important). Lower risk permits higher debt ratios with resulting lower cost of capital. A large firm may have some degree of control over the market. Mergers may be undertaken to acquire senior management skills or research competence. A firm needs to be large enough to afford the often relatively high minimum cost of a research organization. Sometimes tax losses may be made use of through mergers. The owners of the selling firm may find this the best way to withdraw from the firm.

(4) (b) Suppose A and B each has the same number of outstanding shares and the shares are selling at the same price of $25. A earns $2.50 a share (P/E of 10) while B earns $5.00 (P/E of 5). If A acquires B by a share for share exchange then earnings per share for A will rise to $3.75 and, if the market continues to value A's shares at 10 times earnings, the shares ought to rise to $37.50. However the critical question is why investors valued A's earnings more highly than B's? If it was because A's earnings were growing more rapidly than B's then after the combination the enlarged A will only continue to be worth ten times the combined earnings if A can so operate the combined operations to maintain the growth rate of earnings equal to what it had been for the original A. If this does not take place the P/E will decline to be consistent with the new growth rate of earnings.

34 Q. 3. **ref. Lesson 7 and L. & S. Ch. 20 & 21.**

Dividends in the past have always been purely nominal and that together with the fact that the firm is involved in land development and apparently in exploration for oil and gas would suggest that its investors would likely be interested in capital gains rather than dividends. It thus seems likely that their dissatisfaction stems more from the poor performance of the stock in recent years than from the lack of dividends. Their agitation for dividends may be based on the assumption — rather widely held if not necessarily logical — that the higher the payout the higher the market price of the share.

In the early 60's the earnings rose at 18% per year but since then the rate has been only 6% to 7% which hardly looks attractive to investors interested in capital gains and particularly in view of the fact that the business is somewhat risky. Market value — which was rising relative to book value until 1972 — when it reached 174% of book — has since fallen sharply until it is now only 89% of book. The company has retained $69 per share during the past five years and the share price has actually declined marginally! It is not surprising that the shareholders are dissatisfied and since the Bailey family owns only 25% of the stock a takeover is a clear possibility.

Given the negative working capital position and the high debt equity ratio it is clear that the firm is in no position to repurchase shares, at least for a while even if it stops making further investments in fixed assets. The earnings retained have been invested in fixed assets.

Most of the recent decline in share prices reflects market conditions since it is stated that "Declines in share prices were slightly more severe than those experienced by similar firms and the market generally." Nevertheless the shareholders are clearly unhappy. A substantial increase in cash dividends might help to appease them although this would mean that the company would have to reduce its investment activity — possibly by much more than the increase in dividends since lenders might require a reduction of indebtedness at the same time.

The company might well consider two actions to improve the market price of the shares apart from dividends. Land development operations and the development of oil and gas properties often produce accounting profits only when the properties are sold. It is stated in the case that no reappraisals of land values and reserves have been undertaken since 1950 so the properties may well be undervalued. If this is in fact the case independent appraisals with appropriate publicity with respect to the significance of the results might well lead the market to place a higher value on the shares. Price Earnings ratios in the 10 to 12 range (recently and in the 60's) suggest valuation on the basis of reported earnings rather than future expectations. However the low realized profits over such a long time period (10 years) might suggest that the continuing large investments have not been warranted and the firm should move towards not only distributing current earnings but also gradually liquidating the firm.

Another move could be a stock split on a 5 to 10 to one basis in order to increase the effective demand for the shares. This comes about not, as is so frequently asserted, because it permits the small investor to enter the market but rather because of the peculiar commission structure on the stock exchanges. Since the commission rate is higher the lower the price of the shares brokers and dealers are more likely to recommend low priced shares to their clients. (Another case of market imperfections!)

Theoretically stock dividends would seem to have no merit since they leave the shareholder in the same position as before the dividend.

(6) (a) While with a uniform stream of receipts the reciprocal of the payback is equal to the IRR for a project of infinite life (and a reasonable approximation for long-lived projects) such situations are not common at least in "real" investment projects. Most commonly payback appears to be used as a very crude measure of risk. Looking at an investment project from a break-even point of view the longer we must wait until we have our money back the less certain we can be that we will get it. But with the payback no attempt is made to estimate the profitability of the various cash flows. However if the required payback time extends beyond the point where the management feels it can make any reasonable estimates of cash flows probably no more detailed analysis of the project is justified. As Weingartner mentions some writers have pointed out a more appropriate breakeven concept would appear to be the time required not only to recover the initial investment but in addition the time required to earn the firm's cost of capital — only in this way would it be "made whole" again.

(28) (b) To determine after-tax cash flows from NEBDT deduct depreciation to give taxable income, calculate tax and subtract it from NEBDT. (Alternatively assume NEBDT fully taxable, deduct the tax, and then add back the depreciation tax benefit.) Since the Company is apparently profitable — "$14 million would be available . . . from internally generated sources (depreciation and retained earnings)" — and Project D plus any two others will, as a group, be profitable it seems appropriate to assume that the first year loss on D would yield a full tax benefit that year of $300,000 offsetting the before-tax cash loss of $200,000 to produce a net cash benefit for the year of $100,000. NPVs, IRRs and Paybacks and their rankings are given below.

Project	**NPV ($)**	**Rank**	**IRR (%)**	**Rank**	**Payback (years)**	**Rank**
A	127,500	4	10.3	4	9.2	4
B	150,970	3	10.5	3	8.3	2
C	299,950	1	11.5	2	8.6	3
D	273,400	2	14.1	1	3.9	1

All projects are justified on a NPV/IRR basis at a cost of capital of 10.0%. The available evidence does not suggest that the risk differs significantly among the projects or that it would differ from that of existing operations except, of course, that D provides a 10% return in less than 5 years while the other three require almost their entire projected life of 20 to 30 years to provide the required 10% return.

Serious questions can be raised about both the proposal to limit capital expenditures to internal cash flow and about the estimated cost of outside capital. If investment is limited to the $14 million one project must be deferred (unless a reduction in size is possible) although all meet the NPV/IRR test. Such deferral might seem unwise since competitors have been spending relatively more on capital for the past ten years.

Debt is normally cheaper than equity (since interest is deductible for tax purposes) and some borrowing should reduce — or at least keep down — the cost of capital Ms. Morgan must determine what the Committee means when it says that outside funds are "too costly" at this time. It is the cost of new capital which is relevant for capital budgeting purposes — not historical cost. 10% may be too low a discount rate; the issue is critical because at least A and B are marginal investments.

Q. 4. (b) (continued)

One might be suspicious of a selection procedure which seems to have rather arbitrarily selected one project from each division before actually doing any formal capital budgeting evaluations.

Ms. Morgan should recommend evaluating all serious capital budgeting proposals on a NPV/IRR basis and accepting all that are financially justified dropping the present capital rationing approach. (Of course there may be non-capital restraints on the number of projects that can be undertaken at one time — e.g., shortage of management personnel, etc.) A target capital structure should be adopted to make appropriate use of leverage.

If the Committee insists on its $14 million limit then projects D, C, and B should be undertaken. With capital rationing one chooses projects with the highest IRRs or with the highest NPVs obtained by discounting using the highest IRR from the projects foregone. In the latter case that is approximately 10% — the rate we have used for discounting.

100 END OF SOLUTIONS

Page 5 of 5

CANADIAN CERTIFIED GENERAL ACCOUNTANTS' ASSOCIATION

ADVANCED FINANCE 526 EXAMINATION

JUNE, 1980

Marks **Time: 3 Hours**

Note: 1. Table for "Present Value of $1" is attached.
2. Table for "Present Worth of an Annuity of $1" is attached.
3. Case: "Power Systems Corporation" is attached.
4. Show **all relevant** calculations.

12 Q. 1. Generally either the NPV Method or the IRR Method may be used to make capital budget decisions. Briefly discuss the problems which may be encountered in using these two techniques in each of the following situations:

(8) (a) in choosing among mutually exclusive alternatives.

(4) (b) under circumstances of capital rationing.

20 Q. 2. The Peachtree Company is considering the acquisition for $17,000 of a new machine to produce a new product. The machine is expected to have a life of only two years with no salvage value although a disposal value of $7,700 is estimated at the end of the first year. The projected cash flows from the new product are uncertain and not independent. The following projections have been developed by the Company's new products division:

YEAR 1			YEAR 2		
Demand Level	**Cash Flow**	**Prob.**	**Demand Level**	**Cash Flow**	**Conditional Probability**
			Low	$ 4,000	0.3
LOW	$ 8,000	0.3	Medium	$ 7,000	0.5
			High	$10,000	0.2
			Low	$ 8,000	0.3
MEDIUM	$10,000	0.4	Medium	$10,000	0.4
			High	$12,000	0.3
			Low	$ 9,000	0.2
HIGH	$12,000	0.3	Medium	$11,000	0.5
			High	$13,000	0.3

The company operates in a tax haven and thus is not subject to income tax and its cost of capital is 10.0%. What should it do about this investment proposal?

8 Q. 3. Distinguish between an operating (or service) lease and a financial lease describing two distinct circumstances under which each would appropriately be used.

20 Q. 4. Lusztig and Schwab suggest that in formulating dividend policy the following factors may be relevant:

(a) the firm's reinvestment opportunities

(b) the shareholders' reinvestment opportunities

(c) tax differentials between dividends and capital gains

(d) shareholders' propensity for current income

(e) considerations of corporate control

Required:

Explain how each of these factors could be important and indicate how dividend policy would be affected.

40 Q. 5. Case: POWER SYSTEMS CORPORATION (attached)

(15) (a) Calculate the relevant comparative ratios and other comparative data that might be useful in analysing this merger situation.

(15) (b) Discuss the advantages and disadvantages of the merger from the point of view of each company.

(10) (c) Propose and justify reasonable terms of merger assuming PSC will use only common shares for the acquisition.

100

END OF EXAMINATION

POWER SYSTEMS CORPORATION

In February, 1976, John Stevens, president of Power Systems Corporation of Dover, Delaware, was reviewing acquisition candidates for a possible merger. The leading company appeared to be Hendrix Hydraulics, Inc., of Cleveland, Ohio, a manufacturer of high-pressure pumps, motors, and related valves.

Power Systems Corporation was a leading manufacturer of fluid power systems and related components. Fluid power involved the transfer and control of power through the medium of liquid, gas, or air. Simple fluid power systems included a pump for pressure generation, valves for fluid flow control, a cylinder for translating fluid pressure into mechanical energy, a filter to remove contaminants, and numerous hoses, couplings, fittings, clamps, and seals. Historical operating results and financial condition are summarized in Exhibit 39.1 and Exhibit 39.2.

Company products were classified into three categories: industrial, aerospace, and automotive. Industrial products included cylinders, valves, controls, tube fittings, filters, power systems, hose fittings, connectors, sealing devices, and clamps. Aerospace products included components and systems for ground fueling of aircraft, marine fueling operations, and highway vehicle loading of bulk liquids. Automotive products consisted of worm-drive hose clamps, tire valves, gauges, automotive radio antennae, thermostats, and brake-fluid pumps.

PSC's more than 27,000 customers involved virtually every major manufacturing, transportation, and processing industry. The major markets for industrial products were agricultural machinery, food production, industrial machinery, instrumentation, machine tools, mining, mobile equipment, petrochemical, textile, transportation, and all major production and processing industries. Aerospace sales were primarily related to military and commercial aircraft. The majority of automotive products were sold to replacement markets through warehouse distributors and mass merchandisers.

Hendrix Hydraulics, Inc. manufactured hydraulic pumps, motors, and related valves in a wide range of sizes, pressure ratings, and rates of flow. In recent years, the company had concentrated on high-pressure, large-flow pumps, and motors that were utilized as the central element of the hydraulic power system of heavy mobile earthmoving machines and materials handling machines. The total product line consisted of three basic pump designs and four basic valve designs that were adapted into approximately 900 models. Historical operating results and financial condition are summarized in Exhibit 39.3 and Exhibit 39.4.

Approximately 80 percent of Hendrix's net sales in 1975 were of products used in the basic types of heavy mobile earthmoving machines and mobile materials handling machines. The remainder of sales were primarily to manufacturers of dump trucks and solid waste refuse compactors for utilization in hydraulic systems.

PSC's foreign operations were conducted principally in western Europe. The company had subsidiaries in Argentina, Australia, Brazil, Canada, Denmark, England, Finland, France, Germany, Italy, Mexico, Norway, South Africa, Singapore, Spain, and Venezuela. HHI, on the other hand, depended substantially on eight major heavy mobile machine manufacturers primarily located in the United States.

PSC maintained research and development laboratories and testing facilities in 23 of its 47 manufacturing locations. Its research and development staff was comprised of chemists and physicists as well as mechanical and electrical engineers. The company expended $8,446,500 in the year ending December 31, 1975, on research activities relating to the development of new products or services and the improvement of existing ones. HHI employed 5 engineers and 15 technicians who specialized in hydraulic pump, motor, and valve design and development. During 1975, $413,000 was spent by HHI in its research and development activities.

Three of HHI's eight major customers had required variable-volume pumps on at least one model of their excavators. At the end of 1975, HHI had no plans for manufacturing variable-volume pumps. The company's two principal competitors, who had substantially greater financial resources, were planning to manufacture the variable-volume pumps in 1976.

The two companies differed in the selling price of their common stock. As of December 31, 1975, PSC sold for $29.25 per share and HHI for $12.50 per share.

Exhibit 39.1

POWER SYSTEMS CORPORATION

Condensed operating and stockholder information *(in thousands)*

	Year ended December 31				
	1971	1972	1973	1974	1975
Net sales	$205,660	$234,743	$291,288	$357,778	$370,036
Cost of sales	157,172	176,436	222,049	275,971	279,532
Gross profit	$ 48,488	$ 58,307	$ 69,239	$ 81,807	$ 90,504
Selling, general and adm. expenses	29,579	34,722	37,868	44,154	47,085
Income from operations	$ 18,909	$ 23,585	$ 31,371	$ 37,653	$ 43,419
Other deductions (income):					
Interest expense: On debentures and similar debt	3,616	3,236	3,892	6,445	7,241
On other indebtedness	576	360	113	269	854
Interest income	(260)	(92)	(184)	(230)	(242)
Miscellaneous expense (income)	(178)	(368)	64	(1,341)	(6)
	$ 3,754	$ 3,136	$ 3,885	$ 5,143	$ 7,847
Income before taxes	$ 15,155	$ 20,449	$ 27,486	$ 32,510	$ 35,572
Income taxes	7,621	10,069	13,995	15,916	18,162
Net Income	$ 180 $ 7,534	$ 10,380	$ 13,491	$ 16,594	$ 17,410
Earnings per common share	$1.30	$1.79	$2.32	$2.84	$2.98
Dividends per common share	$0.90	$0.92	$0.94	$0.96	$0.99

POWER SYSTEMS CORPORATION

Balance sheet, December 31, 1975 *(in thousands)*

Assets	
Current assets	
Cash	$ 5,607
Accounts receivable	
Customers	47,360
Other receivables	2,713
	$ 50,073
Inventories	
Finished products	$ 38,154
Work in process	43,782
Raw materials	14,657
	$ 96,593
Prepaid expenses	3,562
Total current assets	$155,835
Other assets	1,494
Plant and equipment	
Land and land improvements	$ 7,457
Buildings and building equipment	46,548
Machinery and equipment	93,643
Construction in progress	4,247
	$151,895
Less: Accumulated depreciation	69,058
	$ 82,837
Patents and licenses	810
Excess of cost of investments in consolidated subsidiaries over equities in net assets	949
Total Assets	$241,925
Liabilities and Shareholders' Equity	
Current liabilities	
Notes payable—banks	$ 8,883
Notes payable—commercial paper	9,000
Accounts payable—trade	14,453
Accrued payrolls, commissions, and other compensation	7,232
Accrued taxes, other than income taxes	4,696
Federal, state, and foreign income taxes	9,530
Other accounts payable and accrued expenses	9,802
Total current liabilities	$ 63,596
Deferred federal income tax	3,659
Long-term liabilities	63,067
Total liabilities	$130,322
Common shares, without par value	1,306
Additional capital	14,841
Retained earnings	95,456
Total shareholders' equity	$111,603
Total Liabilities and Shareholders' Equity	$241,925

Exhibit 39.3

POWER SYSTEMS CORPORATION

HHI condensed operating and stockholder information *(in thousands)*

	Year ended December 31				
	1971	1972	1973	1974	1975
Revenues					
Net sales	$ 6,713	$ 9,047	$12,884	$19,798	$20,455
Other	34	53	38	46	89
	$ 6,747	$ 9,100	$12,922	$19,844	$20,544
Costs and expenses					
Cost of products sold	$ 4,198	$ 5,682	$ 8,704	$14,139	$15,090
Selling, general, and administrative	810	995	1,297	1,693	1,525
Engineering and development	572	713	519	599	562
Interest					
Long-term debt	49	100	224	551	490
Other	4	4	32	38	40
	$ 5,633	$ 7,494	$10,776	$17,020	$17,707
Earnings before income taxes	1,114	1,606	2,146	2,824	2,837
Income taxes	556	725	934	1,332	1,283
Net Earnings	$ 558	$ 881	$ 1,212	$ 1,492	$ 1,554
Earnings per common share	$0.37	$0.57	$0.77	$0.95	$0.99
Dividends per common share	$0.04	$0.07	$0.08	$0.10	$0.11

Exhibit 39.4

POWER SYSTEMS CORPORATION

HHI balance sheet, December 31, 1975 (*In thousands*)

Assets	
Current assets	
Cash	$ 168
Accounts receivable	2,944
Inventories	
Finished parts	2,947
Work in process	1,445
Raw material	1,590
Total inventories	$ 5,982
Prepaid expense	165
Total current assets	$ 9,259
Property, plant, and equipment	
Land	$ 7
Building and improvements	1,330
Machinery and equipment	7,115
Construction in progress	116
	$ 8,568
Less: Accumulated depreciation	2,588
	$ 5,980
Other assets	39
Total Assets	$15,278
Liabilities and Stockholders' Equity	
Current liabilities	
Notes payable	$ 216
Accounts payable	767
Accrued expenses	
Salaries, wages, commissions	211
Reserve for warranty	202
Interest	83
Other	37
Income taxes	40
Current maturities, long-term debt	52
Total current liabilities	$ 1,608
Long-term debt	4,367
Deferred income taxes	566
Total liabilities	$ 6,541
Common shares, $1 par value	1,565
Additional capital	145
Retained earnings	7,027
Total shareholders' equity	$ 8,737
Total Liabilities and Shareholders' Equity	$15,278

CANADIAN CERTIFIED GENERAL ACCOUNTANTS' ASSOCIATION
ADVANCED FINANCE 526 EXAMINATION
JUNE, 1980
EXAMINER'S COMMENTS

Specific

Q.1 In effect one should take into account, for an appropriate time horizon, not only the initial investment but also the subsequent reinvestment of the cash inflows resulting from those investments.

Q.2 While most candidates utilized the disposal value correctly to determine the NPV, on the assumption that the machine would in any case be disposed of at the end of one year, they failed to recognize its significance in the expected NPV over a two year period.

At the end of the first year one has a choice between the $7,700 disposal value and an expected cash flow for the second year for operating the machine. If the cash flow in the first year were MEDIUM or HIGH one would continue operations through the second year since the PV of the expected second year cash flow is, in each case, in excess of the projected disposal value. However, if the first year cash flow were LOW then the disposal value would exceed the PV of the expected cash flow from operations and one would dispose of the machine. Thus, over the two year period the proper 'second year' cash flow to use when the first cash flow is LOW is the disposal value of $7,700 received at the end of year one and not the expected cash flow from operations of $6,700 at the end of year two.

Q.3 Although a financial lease may provide an option to purchase at the end of the initial term it need not. If the 'lease' provides for an essentially automatic transfer of title at the end of the initial period then it would normally be treated, even for accounting purposes, as a conditional sale.

The question asks for the 'circumstances' under which each type of lease would be used. A type of asset, e.g., a Xerox machine or a warehouse - is not a 'circumstance'. And just saying 'taxes' or 'for tax benefits' is not sufficient. It is essential to describe what the tax benefits would be and why they would arise.

Although under a financial lease the lessee effectively assumes some of the risk of ownership, e.g., obsolescence, nevertheless the lessor remains the owner of the asset.

Q.4 Although only a general discussion of the potential tax differences between dividends and capital gains was expected many candidates were obviously not familiar with either the history of such taxation in Canada or the current tax situation.

The dividend tax credit was first introduced in 1949 but its mechanism has been changed and the amount effectively increased since that time. The capital gains tax was first introduced in 1972. At the time the first $1,000 of interest income was also exempted from tax but that exemption has now been extended to grossed-up dividends and to the taxable portion of capital gains.

In part (d) some emphasized the general perference some investors have for certain dividends over uncertain capital gains. However, the need for current income is probably a more important factor here. Dividends are more convenient, cheaper, and much more certain — particularly in the short run — than capital gains.

Q.5 (a) Other figures and ratios might be added. PSCs 27,000 customers could be compared with HHIs 8 major customers. Inventory turnover is 2.89 for PSC and 2.52 for HHI; hardly a major difference.

Calculations of year by year changes in earnings indicates declining increases from 38% in 1972 to 5% in 1975 for PSC and from 54% to 4% for HHI with a very large drop in both cases from 1974 to 1975. (One gets 9% for PSC in 1975 if one ignores the unusually large expense item in 1974 for miscellaneous.) Thus the 1975 decline is not peculiar to HHI. Since PSC shows a similar result one might think the change was due to general economic conditions and in fact 1973 to 1975 was a recession period.

HHI has paid out about 10% of earnings in dividends so dividends have risen with earnings. PSC has held its dividends relatively constant in dollars with the result that they have shrunk from about two thirds of earnings to about one third.

Figures for the average annual growth in earnings or year by year percentage increases are probably rather more informative than just the overall percentage increase for the four years. To get a proper average annual growth rate one should calculate the compound rate. Thus, for PSC, \$1.30 = PV (4 years) x \$2.98; thus, the PV factor is 0.436 which, from the Table, yields a rate of 23.9%. Note that the growth is over 4 years, not 5.

One gets rather different relationships between the two firms depending on whether one looks at total debt or only at long term debt and depending on whether the comparison is with equity or with total assets. Generally HHI's figures are modestly better than PSC's but PSC's are slightly better when we compare long term debt with total assets while HHI's total debt to equity is much better than PSC's. A few candidates did not recognize 'long term liabilities' as synonomous with 'long term debt'.

Candidates were not, of course, expected to include all of the comparisons presented here but the P/E ratios, book value per share, debt ratios, earnings growth, dividend payout and research expenditures relative to sales all seem of considerable relevance.

(b) Since the firms differ so greatly in size, ratios are frequently important. Both are about equally research oriented but PSC probably obtains economies of scale in research. And while HHI may not be in a financial position to undertake the manufacture of variable volume pumps the project might constitute a minor capital outlay for PSC.

Since PSC with the *low* P/E ratio is acquiring HHI with the higher P/E ratio there will be *no* phantasmic growth. Any reasonable merger terms — as suggested in (c) will lead to a reduction in PSC's earnings per share.

Since the Case says that:

> Power Systems Corporation was a leading manufacturer of fluid power systems and related components. ... Simple fluid power systems included a pump ..., valves ...

and that

> Hendrix Hydraulics, Inc. manufactured hydraulic pumps, motors, and related valves ...

it would appear that the merger would more correctly be described as a horizontal than as a vertical one.

Because of the large differences in size of the two firms the addition of HHI to PSC will have relatively little impact on the latter. However, the owners of HHI, a firm heavily dependant on a very small number of customers, become shareholders in a very much larger firm with a very much broader base of customers and with a worldwide rather than a domestic market. Thus, their position will change quite significantly. However, if there was a controlling shareholder group in HHI they will become relatively insignificant minority shareholders in PSC.

Although PSC has a very much larger cash balance than HHI when one relates cash to either total assets or to days-operating-expenses it is only twice as large.

Since HHI shareholders will exchange their shares for PSC shares in the merger they must consider the advantages of being shareholders in the larger firm compared to their present situation. In estimating the worth of their shares they would consider the benefits to PSC of acquiring HHI, e.g., synergy, displacing outside HHI suppliers, increased sales of HHI products through the PSC distribution network, possibly additional management skills, etc.

(c) In order to acquire a majority (or at least a large enough block to constitute an effective controlling interest) of the shares of a company it is normally necessary to offer the shareholders something more than the current market price for their shares. They must be given an inducement to act and to act quickly. Furthermore, a controlling interest is normally considered to be worth more per share than insignificant minority interests; it is the value of the latter that day to day market transactions normally reflect. Thus, PSC would presumably have to offer something more than one PSC share for each 2.34 shares of HHI — the market value ratios. An offer very close to 2.34 might well be regarded as a virtual invitation to other firms to enter the bidding. On the other hand a one for one offer, suggested by some, would seem grossly excessive. Something around 1 for 2 seems reasonable. The increase in dividends to HHi shareholders, from 22¢ to 99¢, would be an added attraction.

Some candidates developed offers based solely on what would be attractive to PSC. These would offer HHI shareholders less than current market value and no adequate reasons were given why HHI shareholders should accept.

Some suggested that the value should be determined by estimating the value of future HHI cash flows but did not attempt to do so. (Information was really not adequate to utilize that method in this case.)

CANADIAN CERTIFIED GENERAL ACCOUNTANTS' ASSOCIATION

ADVANCED FINANCE 526 EXAMINATION

JUNE, 1980

SUGGESTED SOLUTIONS

Marks **Time: 3 Hours**

12 Q. 1. **ref. Lesson 2 and L. & S. Ch. 5.**

(8) (a) Rankings under NPV and IRR may differ. Contradictory rankings occur whenever the present value profiles (i.e. curves of NPV versus Discount Rate) cross at a rate above the cost of capital (or other appropriate discount rate for the problem). The proper decision depends on what investment opportunities will be available for the funds released by the initial project. If they could only be re-invested at the discount rate then NPV would give the correct answer; if they could be reinvested at the IRR of the project then one should choose the project with the highest IRR. However the appropriate reinvestment rate may be somewhere in between. Only if it is above the Fisherine intersection will both methods give the same result.

Where the size of the investments differs then account must also be taken of the cash inflows resulting from investing the cash "saved" by choosing the project requiring the lower investment.

(4) (b) The problem is essentially the same. However here we have evidence that the reinvestment rate for the released funds will be greater than the cost of capital. In such cases the appropriate discount rate to use for the NPV method is the IRR for the project with the highest IRR among the projects that must be rejected because of the capital rationing.

20 Q. 2. **ref. Lessons 1, 2 & 5 and L. & S. Ch. 5 & 6**

YEAR 1	YEAR 2
8,000 x 0.3 = 2,400	4,000 x 0.3 = 1,200
10,000 x 0.4 = 4,000	7,000 x 0.5 = 3,500
12,000 x 0.3 = 3,600	10,000 x 0.2 = 2,000
10,000	6,700
	8,000 x 0.3 = 2,400
	10,000 x 0.4 = 4,000
	12,000 x 0.3 = 3,600
	10,000
	9,000 x 0.2 = 1,800
	11,000 x 0.5 = 5,500
	13,000 x 0.3 = 3,900
	11,200

If we abandon at the end of Year 1 we have
-17,000 + 0.909(10,000 + 7,700) = -911 NPV

If we continue for two years we have
-17,000 + 0.909 x 10,000 + 0.826(0.3 x 6,700 + 0.4 x 10,000 +0.3 x 11,200) = -170 NPV

However if we examine the second year cash flows we find that if the cash flow in year 1 is only $8,000 then the expected year 2 cash flow is only $6,700 which, even undiscounted, is less than the $7,700 salvage value at the end of year 1. (The PV's of the other two second year cash flows are greater than $7,700). Thus if the year 1 cash flow were only $8,000 then we would dispose of the machine for the $7,700. Thus the two year expected cash flow would be revised by adding $7,700 to the year 1 operating cash flow of $8,000 and eliminating the projected year 2 cash flow for the low year cash flow as follows:

-17,000 + 0.909 x 12,310 + 0.826(0.4 x 10,000 + 0.3 x 11,200) = 269 NPV indicating that the machine should be purchased.

8 Q. 3. **ref. L. & S. Ch. 18**

(4) An operating lease involves a fixed commitment for a period of time much less than the expected economic life of the asset and the financial commitment is much less than the cost of the asset. It is used in place of purchase in two situations. First where the user does not expect to need the asset for its full economic life; an example would be a temporary need for warehousing space. Second, a firm might rent a computer under an operating lease simply because it considers the risk of obsolescence very high and unpredictable and judges that the lessor (usually the manufacturer) can dispose of the asset more efficiently and at a higher value when it becomes obsolete. Thus the lessee either expects his cost to be lower this way or is willing to pay a rather high insurance premium to avoid the risk of ownership. Under operating leases the lessor is usually responsible for maintenance.

(4) A financial lease is a financial equivalent to a purchase. The lessee's firm commitment is for an amount normally equal to the cost of the asset plus a specific return on investment to the lessor. This will be chosen over purchase where there are financial advantages. If the user does not have sufficient taxable income to make full use of capital cost allowance and any investment tax credits then arranging for ownership to rest with a firm which can use these will be advantageous. Small firms may lease for three reasons. First their tax rate may be lower than for large firms. Second they may be unable to borrow small amounts of money required for a single asset. Third the firm prepared to provide the financing may perceive its risk to be much less under a lease than as a lender and offer better terms under a lease. With financial leases the lessee is normally responsible for maintenance. Financial leases are typically for equipment having alternative uses (or users) although buildings are sometimes handled this way.

20 Q. 4. **ref. L. & S. Ch. 20**

(a and b)
Since the firm's objective should be to maximize shareholder wealth it should reinvest earnings so long as it can earn a return on its equity in excess of what the shareholder could earn on equity of comparable risk if earnings were distributed in dividends. Since what investors can earn on investments of comparable risk determines the yield on a firm's stock we can also say that a firm should reinvest earnings so long as earnings on its equity will exceed its cost of equity capital. Although it can be shown theoretically (M&M) that given perfect markets dividend policy is irrelevant — given the appropriate investment policy by the firm — issuing cash dividends and then raising funds by new equity issues incurrs issue expenses which could be avoided by retaining earnings.

(c) The above, however, disregards personal income tax. Depending on one's taxable income dividends may be preferred over capital gains or vice versa. Since investors' tax positions vary widely and are only determinable for closely held corporations, firms should probably ignore tax impacts on their shareholders and let them choose the firm whose policy, determined on the above basis, best fits the investors' needs. (In recent years the option available to shareholders in individual firms to choose between cash dividends or retained earnings and capital gains means that such firms need no longer consider the issue.)

(d) Many shareholders are dependent on regular income from investments for their livelihood. While theoretically they could sell off some shares each year — this need is sometimes advanced as a reason for issuing stock dividends — the cost and inconvenience normally makes this system unattractive. Firms whose prospective returns on equity on new investments are not expected to be very much higher than cost of equity — e.g. the regulated utilities — will generally find it in their best interest to appeal to investors interested in regular income and to pay out as high a proportion of their earnings as is consistent with maintaining stable — or gradually rising — dividends.

(e) Control is seldom a factor. Theoretically a controlling shareholder might find it risky to sell off shares to obtain income. However most large corporations are controlled by relatively small minority interests with most shares widely dispersed among very large numbers of relatively small shareholders.

40 Q. 5. **ref. Lesson 8 and L. & S. Ch. 28**

(15) (a) **SOME RELEVANT COMPARATIVE MATERIAL, 1975**

	PSC	**HHI**
Book Value/share	19.10	5.58
Market Value/share	29.25	12.50
Price/Earnings	9.82	12.63
Earnings/share	2.98	0.99
Dividends/share	0.99	0.11
Current Ratio	2.45	5.76
Total Debt/Equity	1.10	0.64
LT Debt/Equity	0.55	0.47
Research Expenditure as % of Sales	2.3%	2.0%
Net Current Assets/share	15.79	4.89
as % of Market Value	54%	39%
Sales/Total Assets	1.53	1.34
EPS. Average annual increase since 1971	23.1%	28.0%
Market Value/Book Value	1.53	2.24

(15) (b) Both firms should benefit from the following factors. The product lines are similar and apparently compatible. Each could probably expand its sales into the other's market although HHI might benefit more from PSC's foreign market. Some economies in production might be possible. PSC's resources would probably permit the development of the variable volume pumps currently being introduced by HHI's competitors. Both firms are research oriented.

HHI might benefit more from access to PSC's export market than PSC would benefit from access to HHI's domestic customers. It would probably solve the problem of developing the variable volume pump and protect its competitive position. PSC is 15 times as big so being a shareholder of it would seem more secure than being a shareholder of HHI.

HHI's higher P/E ratio might be the result of a number of things. Its earnings were growing more rapidly — at least in 1972 and 1973. Large companies eventually have their growth restricted to that of the economy in which they operate while small firms have the potential for more rapid growth. Given the relatively high returns on book equity (16% for PSC and 18% for HHI in 1975) investors may prefer the higher earnings retention by HHI.

HHI's higher P/E ratio may reflect its lower debt to equity (both total and long term) and its much better current ratio. PSC is obviously relying much more heavily on short term debt than is HHI.

We know nothing about the owners or managers of HHI. The owners would occupy a small minority position in PSC and the HHI management could be disposed of if PSC so desired.

(10) (c) We have no information about the market price of the shares of either company over the five years. 1975 seems to have been a poor year for both companies with earnings rising very little. PSC would probably have to offer one share for every two of HHI. This would give HHI $29.25 for $25 of current market value or an increase of 17%. Dividends would rise from 22¢ to 99¢ for every two HHI shares or an increase of almost 5 times which ought to be quite attractive. The impact on PSC would not be great since shares outstanding would only rise by 13%. Because of the unfavourable Price/Earnings relationships — from PSC's point of view — EPS will be reduced initially but only by 8¢ or 3%. Assuming some benefits of combination this should quickly be reversed.

100

END OF SOLUTIONS

CANADIAN CERTIFIED GENERAL ACCOUNTANTS' ASSOCIATION
AUDITING 557 EXAMINATION
JANUARY, 1980

Marks

Time: 3 Hours

12 Q. 1. You have just been engaged to introduce and head up a managerial auditing function in a multi-unit business corporation which has not previously had such a function. You will be engaging a small staff of 6 or 7 to assist you. You report to the Executive vice-president who has asked you to write a memo to him expressing clearly the nature of the relationship you envisage between you (i.e., your department's work) and the corporation's firm of public accountants.

Required:
Write the required memo.

12 Q. 2. Further to Question 1, you have now engaged an initial group of four assistants with the following backgrounds:

- A CGA from public practice
- A CGA from industry
- An MBA majoring in finance
- An MBA majoring in marketing

You have set up a meeting with them at which you are going to explain the underlying concepts and procedures in initiating a managerial audit of a relatively autonomous unit located some distance from headquarters. In effect, you are going to outline how you feel an audit review should get started--up to the point where actual collection/examination of audit evidence starts.

Required:
Write the notes you will use to summarize your discussion.

16 Q. 3. Further to Question 2, you plan to hold individual counselling sessions with each of the four initial members of your staff. You plan to discuss with each auditor the aspects of his existing background that will be particularly valuable and "transferable" to your function of managerial auditing. At the same time, you plan to discuss those areas in which each auditor may be relatively uninformed and where he will need further study/training and/or modification/extension of his/her existing knowledge.

Required:
Select **any two** of the following members of your audit staff and set down the points that you would expect to deal with in the individual counselling sessions:

a) CGA from public practice. He/she has spent a couple of years in a relatively small practice following qualification.

b) CGA from industry. He/she has progressed to the position of branch accountant at an operating unit and has been a CGA for five years.

c) Recent MBA graduate who has majored in finance following a general B. Administration/Commerce degree.

d) Recent MBA graduate who has majored in marketing following a degree in mechanical engineering.

14 Q. 4. Your company has used computers in a limited, fragmented way. It now proposes to apply EDP extensively. In the hopes of achieving an effective use of EDP, a "computer committee" has been formed comprising some half-dozen senior executives representing all of the major functions of the company. This committee has asked you – head of the managerial audit function -- where and how you envisage your department should be involved in the development and installation of individual EDP-based systems projects.

Required:
Write a memo to the Committee to explain in fair detail the nature of your involvement.

10 Q. 5. **Explain briefly the reason** for each of the following questions taken from a typical questionnaire for the review of an EDP datacentre. In your answers, bring out the reservations you would have (as an auditor) to "No" answers elicited by the question:

a) Are systems and programming personnel restricted from operating the computer on regular processing runs?

b) Are initiating departments required to establish independent control over data submitted for processing?

c) Is a record maintained of the total volume of cards produced and the number of errors made by keypunching operators?

d) Is there a computer-produced log of all work processed?

e) Are all changes to master files communicated back to the originating department?

18 Q. 6. You have been assigned – as a managerial auditor -- the task of reviewing the recent acquisition of a major piece of plant equipment which replaced outmoded equipment and necessitated some plant re-arrangement.

Required:
Identify and **explain at least 12 significant** aspects of this now-completed project that you, as a managerial auditor, would plan to review.

18 Q. 7. You have been assigned the task of conducting a managerial audit review of the sales department of your manufacturing-marketing company. This department is primarily responsible for calling on customers (and prospective customers) to get orders. As such, it employs a sizable staff of travelling salesmen with appropriate sales supervisors. This department is NOT responsible for other usual marketing functions such as advertising, marketing research, etc. The general sales manager reports to the vice-president, marketing.

Required:
Identify and **explain at least ten significant** aspects of this department that you, as a managerial auditor, would plan to review.

100

END OF EXAMINATION

CANADIAN CERTIFIED GENERAL ACCOUNTANTS' ASSOCIATION
AUDITING 557 EXAMINATION
JANUARY 1980
EXAMINER'S COMMENTS

General

Many answers were far too superficial for the number of marks. In certain questions, a large percentage of the candidates were giving good answers to last year's questions. They blindly wrote at length on the particular slanting of questions on previous exams. Many candidates seem to be unable to answer questions about the lesson material that call for something more than a straight regurgitation.

Specific

Q.1 Many candidates did not write a memo but answered in point form or in a rambling essay. Some who wrote memos treated the V-P in a condescending manner while covering only the differences in objectives and nothing else. Many candidates answered last year's question that requested a comparison between external and internal auditing. The question on this exam was specifically: 'the nature of the relationship you envisage between you and the corporation's firm of public accountants.'

Q.2 Most candidates never got beyond a lecture on the basic principles of management auditing and/or a run-down on the steps in conducting an audit, clear down to issuing the report. They never read (or understood) the last sentence: 'How an audit review should get started up to the point where actual collection/examination of audit evidence starts.' Many answers were simply 'pep talks.' Seldom was there any reference to discussing the impending audit with the executive in charge of Head Office. The answer is taken almost word for word from page 31 of the text.

Q.3 Many candidates did not organize their answers around the suggestion in the question — 'Transferable Skills' and 'Uniformed Areas.' Many candidates gave answers that were much too brief - just a series of two and three word phrases that are not in sufficient depth for 16 marks. Fewer than 10% even mentioned GAAP or GAAS as topics with which the CGA in public practice would be quite familiar. Fewer than half of the candidates mentioned that three of the four new hires would have had no exposure to auditing. Again, many students offered a pep talk or reviewed what management auditing is all about.

Q.4 The key phrase in the question is 'where and how your department should be involved in the development and installation of individual EDP-based systems projects' - not a request for the '9 significant questions you would ask about the proposed project.' Many students perceived the position of the managerial auditor as omnipotent - an approver of projects rather than a staff advisor. It is not the place of the head of the auditing department to demand a seat on the committee and/or make the decisions or see to implementation. This question called for some marshalling of knowledge on the control aspect of the overall development of an EDP project.

Q.5 This question was quite well answered.

Q.6 The majority did not see the essential features of an audit of a project. Many candidates never got above mere accounting matters and/or got side-tracked into tremendous detail on such matters as receiving bids, etc. The answers tended to lack logical structure.

Q.7 Many candidates went on at great length about the accounting department's role and internal control over sales, invoices and shipping. They devoted very little of their answers to the real managerial audit of the sales department itself.

CANADIAN CERTIFIED GENERAL ACCOUNTANTS' ASSOCIATION
AUDITING 557 EXAMINATION
SUGGESTED SOLUTIONS
JANUARY, 1980

Marks **Time: 3 Hours**

12 Q. 1. References are Text pp. 2 to 7; 10, 11.
Candidates should bring out the following points:

(2) • Important at the outset to recognize the basically different objectives of the work of the managerial auditor and the public accountants. (This could be summarized.)

(2) • The only significant area of overlap is in the review of internal controls leading to the recording of transactions in accordance with GAAP. It would be desirable to avoid duplication of audit effort in this area.

(2) • Suggest that managerial auditor and the public accountants discuss their relative needs for collection of audit evidence to see where they are sufficiently similar as to enable elimination of duplication with a minimum of additional work for either audit group.

(2) • It may be that some of the smaller operating units of the company could be reviewed by the managerial auditors in a way that would not burden them with work they would not normally carry out but satisfy the public accountants. Some of these might be small enough to be examined on a rotation basis over a period of three or four years.

(2) • Must consider the total auditing cost and keep it within reasonable limits. This calls for carefully thought out cooperation and coordination of activities of the two sets of auditors without "watering down" the unique services available from managerial auditors.

(2) • In the interests of getting the most value out of the managerial audit function, this group's work should not be interrupted any more than is absolutely necessary to help the public accountants. For example, the managerial auditors could profitably collaborate in such major tasks of mutual interest as physical inventory observations, circularization of accounts receivable, but should not be regularly expected to compile schedules, etc. required by the public accountants. That client-assigned work is the job of the finance department.

(2) • Reports and working papers of the managerial auditors should be made available to the public accountants. It would be helpful if the public accountants would reciprocate as this would help the managerial auditors decide on areas for their in-depth reviews.

12 Q. 2. Reference is Text pp. 26 to 35.
The candidate's answer should contain the following points:

(1½) • Obtain background information on the unit to be examined. See what risks there are that ought to be given special attention, or developing trends that arouse curiosity.

(1) • Review previous audit report(s) (if any) and previous audit reports by the public accountants.

(2) • Discuss forthcoming audit with the executive at headquarters responsible for the unit to be examined. See if he knows of any problem areas with which the auditor might help.

(2) • Either through this executive, or direct to the manager of the unit to be examined, advise the line people of the impending audit and request working space, any advance data requirements, etc. If required by the nature of the company unit, it may be necessary to commence the audit on a surprise basis.

(1½) • Draw up a general plan for the audit and review with the audit manager and the executive at the headquarters. Keep in mind that all sub-functions may be covered only on a cycle basis. On the other hand, it may also be desirable to examine a particular sub-function at all units visited in a particular year.

(1½) • On arrival at the unit, visit the local general manager and senior department heads to discuss the objectives of managerial auditing, in general, and this one in particular.

(2) • Review the criteria already established for the several sub-functions and determine those that are the most significant for managerial audit review.

(3) • Review existing policy and procedure manuals along with position descriptions to get a further "feel" for the unit. Conduct a comprehensive plant tour as part of the orientation process; take notes for subsequent follow up.

(3) • Draw up a more detailed plan for the audit based on this preliminary overview. Decide on the general nature of sampling that will be necessary to adequately review and test the systems of internal and management control and to test compliance with policies and the achievement of stated goals.

16 Q. 3. Reference is Text pp. 14 to 19. Give up to 8 marks each.

a)

(1½) • Should have an excellent grasp of GAAP and GAAS. These will be of value in evaluations of an accounting nature and, of course, in bringing an understanding of the basic auditing process.

(1½) • Should be familiar with basic auditing procedures and have skill in the techniques of auditing records.

(1) • Experience in public accounting would have accustomed him/her to working in a variety of circumstances.

(3) • Not likely to be familiar with the operations and resulting problems of a large multi-unit company. Not likely familiar with organizational, motivational and management considerations of larger organizations. Depending on nature of the practice, may have been exposed to some counselling of smaller businesses.

(2) • Experience has been oriented to expressing an opinion on financial statements of relatively small businesses as distinct from evaluation of controls and managerial performance in a large enterprise.

(1) • Apt to view situations through the eyes of an accountant per se, rather than through the eyes of a manager.

b)

(1½) • Should have a good knowledge of GAAP but not likely so good as in the case of 3a) because of the former's broader exposure to many enterprises and professional responsibility.

(1½) • Not likely very familiar with GAAS and exposure to the work of auditing is likely very little.

(1) • Possible that outlook has been limited by working for only one company.

(1½) • Interests apt to be narrowly focussed on accounting per se but this will depend on previous employer, responsibilities and the particular individual.

(1½) • May have a fairly detailed knowledge of the workings of one company/industry but may have little parallel knowledge of others.

(1½) • Will need training in all aspects of practical auditing and in the approach of managerial auditing.

(1) • May or may not have much understanding of operations; depends on nature of former responsibilities and the individual.

(1½) • Extensive experience in dealing with people and in getting work done to a predetermined schedule.

c)

- (1½) Should have a reasonable knowledge of accounting -- though not necessarily too familiar with GAAP. May be well up on current accounting thought.
- (1½) Should have a substantial ability to think conceptually and to analyze a given situation.
- (1½) Should be able to analyze the cost/benefit positon of any situation.
- (1½) Lacking in auditing knowledge or experience.
- (1½) Should have a good knowledge of basic business functions and the functions of management.
- (1) Lacking in work experience.
- (1½) May be lacking in ability to work with others due to the above lack in work experience.

d)

- (1½) Has most likely studied only basic accounting although probably from a management viewpoint.
- (1½) Should have a substantial ability to think conceptually and to analyze a given situation.
- (1½) Lacking in auditing knowledge or experience.
- (1½) Should have a good knowledge of basic business functions and the functions of management.
- (2½) Lacking in work experience and possibly in the ability to work with others.
- (1½) Background in engineering and marketing should be particularly helpful in carrying out assignments in those areas.
- (1) Why was this person hired? To be considered as a "trainee" for promotion to a line or staff position elsewhere in the company?

14 Q. 4. Based on chart in Lesson 2, app. 13:28.

(2½) • Auditor should review the general policies and procedures for application selection to see that they are such as to ensure a careful and factual review of proposals so that only those promising a satisfactory cost/benefit relation will be considered and that consideration will also be given to relative priorities. Then, for each proposal that comes along, he should see that it has, in fact, been subjected to such a searching review.

(2½) • Auditor should review the system proposal for evidence of adequate internal controls considered and provided, in the general proposal along with evidence that the system would be "auditable."

• Auditor should review several aspects of the overall process of designing the system in detail, e.g.,

(2) - See that the systems department has been factual and unbiased in gathering the basic data about the existing system and/or the operation with which the system will be concerned.

(1½) - See that the proposed data base and processing steps contain adequate, workable internal controls as well as precautions against loss, etc, of data.

(1½) - The auditor's involvement here comes to focus on the detailed systems specifications which are presented to management for final approval. This is the auditor's opportunity to ensure that the system as a whole -- as well as individual parts -- contain adequate controls and is "auditable."

(2) • Auditor should review the test data to see that it does, in fact, "test" for all manner of errors and combination of errors. See that weaknesses disclosed in the test were corrected and re-tested.

(2) • Auditor should ensure that controls are in effect during any conversion of files from old system or old format to the new; that is, make sure that no data or information are lost or distorted.

(2½) • Auditor should play a major part in carrying out the post-implementation evaluation to see that that the system has, in fact, achieved the advantages that formed the reason for its authorization, and that it was accomplished within the time and expense budget authorized.

10 Q. 5. The questions are taken from the internal control review questionnaire applicable to the EDP function on Lesson 3 app. 1:12 to 19. (Two marks each.)

a) These people should be prohibited from operating the computer on regular processing runs because, with their intimate and technical knowledge of the system and, in particular, of the programs, they could easily modify the operation of the program to perpetrate a fraud for their own benefit.

b) This control is necessary to ensure that personnel in the datacentre itself will be prevented from deleting, adding or otherwise distorting input data sent to the datacentre for processing. This is a necessary control to ensure that data are not lost or distorted in transit to the datacentre.

c) This serves as an essential quality control over the work of these people in the datacentre. The supervisor of the datacentre is concerned with such aspects of the work as well as willful loss and distortion of data.

d) This provides positive proof of what jobs and files were actually processed by the computer; when compared with the jobs scheduled and authorized acts as a deterrent to the processing of unauthorized jobs.

e) This provides positive proof to the originator of the file changes that the authorized changes -- and **only** the authorized changes were made. Provides a deterrent to attempts to perpetrate a fraud by fraudently changing master file constants.

18 Q. 6. The reference is to Lesson notes 6:1 to 6:7.

(4) • Review documentation, etc. in support of the original proposal and its authorization. See that the project justification was factually correct in accordance with the **facts that would have been available at that time**. See that there were no significant errors of fact or judgment in connection with the proposal, its justification, and management approval. For example, see that the project was dealt with in accordance with standing policies and procedures.

(1) • See that the essence of the approved project was carried out in the various implementing documents such as work orders, purchase orders, etc.

(2) • Review or test charges to the accounts set up to record this acquisition to see that they, too, were in accordance with the chain of authorizations, that those charges are backed up by evidence that value was received, and that they have been recorded in accordance with company accounting policies and procedures.

• In particular, see that the following items of cost have been appropriately handled and were allowed for in the estimates:

(1) - delivery and installation costs
(1) - site preparation
(1) - relocating existing equipment
(1) - removing/demolishing the supplanted equipment
(1) - time of production workers while the plant is idle for the change-over.

(1) • See what happened to the old equipment and whether it had some salvage value and if so, that payment was received.

(1) • Follow up the disposition of spare parts that specifically relate to the abandoned equipment.

(1) • Enquire into the need for, and the facts of, the acquisition of spare parts for the new equipment.

(1) • If installation work was done by company employees, review the handling of applicable factory overhead.

(1) • See that the distinction between items to be expensed and capitalized is in accordance with company policy, and was allowed for in the original proposal. If not in accordance with CCA regulations, see that the necessary data are available for the necessary tax adjustments.

(1) • Investigate thoroughly any cost over-runs anywhere in the project.

(2) • If it is not company policy to conduct a post-implementation review, consider the timeliness of including such a review in the audit, i.e., see if the advantages claimed in the proposal have, in fact, been realized. (It may be too soon to conduct such a study.)

(1) • If work was done by outside contractors, review his charges, application of his overhead, etc. as called for by the contract, treatment of surplus material, etc.

(1) • Follow up the handling of insurance during and on completion of the project.

(1) • Follow up the handling of surplus materials purchased for the project.

(1) • Review the overall controls over the handling of the project in terms of efficient use of labour, materials, minimizing of down-time, etc.

18 Q. 7. The references are to Lesson Notes 8:4 to 8:6, Text pp. 160 to 164.

(2) • Review the stated objectives/goals of the marketing function, the sales department and all the supporting functions. This may necessitate discussions with appropriate managers. See that the various departmental goals are mutually supportive.

(2) • Review the organizational structure of the sales department to see that it, too, supports the objectives/goals for the department.

(1½) • In particular, study the objectives of the sales department as a guide to evaluating the operation as the audit progresses.

(1½) • See whether the overall department goal has been finely divided into sub-goals or criteria for judging performance of sales supervisors and individual salesmen. Evaluate the establishment of such goals for reasonableness, e.g., comparative work loads, the economics of individual sales territories, cost/volume factors, etc.

(1½) • Review existing analyses (or prepare analyses) of the salesmen performance in accordance with the established criteria.

(1) • See what managerial use has been made of such analyses (above) in developing and motivating salesmen.

(1½) • Review the policies on developing customers. For example, see whether excessive effort is being spent on developing customers whose sales potential doesn't warrant such effort.

(1) • Review the policies on pursuing prospects in similar fashion to the above.

(1½) • Review the policies and practices re the promotion of the more profitable products, developing the more profitable customers, etc.

(2) • Review the control over salesmen's expenses

- approval of expense reports
- control over the absolute amount of expenses and their relation/justification to the results achieved.

(1½) • Review (or conduct if appropriate) a survey of customers to see how satisfied they are with the service from the sales representatives.

(1½) • Review sales returns to see if there is any evidence of ineffective or over-selling.

(1½) • Review and evaluate long-term plans and forecasts of the sales manager to improve sales position, develop underdeveloped sales areas, seek out new customers, etc.

100

END OF SOLUTIONS

CANADIAN CERTIFIED GENERAL ACCOUNTANTS' ASSOCIATION
AUDITING 557 EXAMINATION
MARCH, 1980

Marks — Time: 3 Hours

9 Q. 1. In a conventional, financially-oriented attest audit, a major criterion which the public accountant applies in forming his audit opinion is "generally accepted accounting principles."

Required:
Discuss the problem of "criteria" for the Managerial auditor by **comparing** his position with that of a public accountant in terms of:

a) existence and precision of criteria;
b) challenging the criteria by the auditor; and
c) familiarity with the criteria by readers of the audit report.

6 Q. 2. The following is an excerpt from a frequently-quoted definition of operational auditing:

"A **systematic**, **independent**, appraisal activity within an organization for a review of the entire departmental operations **as a service to management...**"

Required:
Explain, in two or three sentences for each, the significance of each of the underlined words/phrases.

14 Q. 3. You have just been appointed the first internal auditor of an organization that has recently undertaken to introduce EDP systems. You plan to conduct a "management" audit of the effectiveness with which EDP resources are being allocated within the company.

Required:
Discuss in some detail what you would investigate under the following topics:

(6) (a) The overall computer feasibility study.

(4) (b) Management involvement.

(4) (c) Project selection.

20 Q. 4. You have been assigned the task of reviewing the operation of the internal controls over the processing of accounts payable invoices by the company's own datacentre. The control procedures with which you will be concerned start at the point where suppliers' invoices have been matched with purchase orders and receiving reports, they have been coded for accounting distribution, and are now ready for payment and recording by EDP methods.

Required:

(14) (a) Describe in detail the various ideal control procedures within the datacentre and elsewhere, that you would expect to find in a daily batch-type of operation in which all recorded invoices are paid by cheque once a week.
Ignore routines for rejected data, signing cheques, and controlling cheque forms.

(6) (b) Set down particulars of the audit steps you would carry out to assess the operation of the control procedures described in part (a). **Do not provide "questions". Give audit procedures.**

15 Q. 5. You have been assigned the task of preparing a questionnaire to guide your inquiry and evaluation of the overall operation and control of the procurement function.

Required:
Give 8 major topical questions, or groups of related questions that you would incorporate into your questionnaire. Marks will be awarded in relation to the depth of thought and perception revealed in your suggested questions.

14 Q. 6. Set down in some detail, under the following topical headings, the major points that you would review in connection with a managerial audit of a sales department; you may express your points in either the form of questions from a questionnaire or audit procedures:

(a) organization of the department to meet its goals;

(b) control over the realization of sales objectives;

(c) control over effective deployment of individual salesmen's efforts;

(d) control over selling expenses.

12 Q. 7. Identify four important matters-from a management view-point-that an auditor should look into in evaluating the handling of fire insurance in a manufacturing company. Explain why these are 'significant' and what the auditor would be looking for.

10 Q. 8.

(5) (a) **Outline** the basic steps in preparing and issuing an effective, written report at the end of a managerial audit.

(5) (b) Set down in point form the main sections of a written report dealing with the results of a managerial audit.

100

END OF EXAMINATION

CANADIAN CERTIFIED GENERAL ACCOUNTANTS' ASSOCIATION
AUDITING 557 EXAMINATION
MARCH, 1980
EXAMINER'S COMMENTS

General

On the whole, the answers were better than on the January 1980 exam. It is still very noticeable that candidates generally do much better on questions that can be answered through a photographic memory from the text/notes. They do not usually do well when called upon to put together material from different parts of the course. Analytical abilities seem to be weak.

Specific

Q.1 Students are confusing auditing standards (GAAS and others) with performance standards (GAAP and others). Many commented about the auditor having to establish performance criteria, but few referred to the fact that he cannot establish these entirely on his own initiative. Many candidates are weak on the idea that GAAP are well established, cover most situations and are accepted without much question. Some candidates mistakenly consider that 'challenging the criteria' refers to the auditor's taking exception to what the client has done, and vice versa. There was much talk in vague generalities about 'management principles' as the internal auditor's criteria.

Q.2 Most candidates did not remember that, in the quoted reference, 'systematic' referred to a planned, orderly cycle of audit coverage. Many candidates are defining the word as referring to the use of audit programs and the means for carrying out a particular audit.

Q.3 Many candidates are still trying to answer Question 5 on the February 1979 exam. Part (a) requires an audit of a *study* not a study of the need for a computer. In part (b), all candidates said that there should be management involvement, but did not discuss 'in some detail'. In part (c), the question asked for '*project* selection', not a *computer system* selection.

Q.4 Given the fact that many of the candidates have probably had experience in this area, the question was not well answered. In part (a), a step by step approach was required but seldom followed by the candidates. Many branched off into control aspects of the data processing centre including discussions on security, temperature, hardware, etc. - all of them irrelevant. Surprisingly few candidates considered such basic control measures as stamping, cancelling or perforating processed invoices to prevent re-submission. Part (b) was poorly answered. A majority of the candidates were going to 'review' or 'observe' all kinds of things but only a few got down to brass tacks and suggested the appropriate audit tests. The audit tests required are almost elementary but candidates chose to discuss broad concepts and poorly defined reviews.

Q.5 I am amazed at the ability of many students to quote portions of the text and/or lesson notes with remarkable precision - as they often did in this question. The principal shortcoming in answers here was simply not enough good points. A significant number of candidates ascribe far wider responsibilities to the procurement/purchasing function that is the case, e.g., accounts payable, stores, inventory management, etc. Candidates do not seem to realize that decisions as to *what* to order and usually its quality are made by the user—normally a line function. The job of the procurement department—a service department, is to find a supplier and to advise the user on sources, alternate materials, etc. that he may not have been aware of.

Q.6 (a) This part dealing with organization was poorly answered. A majority of candidates did not consider the number of salesmen in relation to areas served or location.

(b) This part dealing with control over objectives was generally well covered; in fact, most candidates devoted much of their answers to a long discussion of budgets.

(c) Under the heading of control over salesmen, most candidates discussed value analysis of customers but few gave any consideration to developing customers.

(d) The control over expenses was well covered and often discussed at considerable length.

Q.7 It must be pointed out to many candidates that we are auditing insurance, not considering how to prevent fires. Candidates tend to say: 'See whether depreciated cost or replacement cost ...' Why? What's the significance of the question? Similarly, they offer the statement, 'See if there are sprinklers, etc.' Again, what is the significance?

Q.8 It is truly amazing how many candidates don't know what is meant by 'sections' of a report. Many offered homilies on desirable features of reports and report writing but failed to even say that the report was to be written. Many don't know what the basic steps are to produce a report. Many candidates never included as steps the preparation of the final report and its issuance. In part (b), many candidates think that 'point form' means a half dozen *single* words in a column. Other candidates did not provide a logical order to the several sections of a report. This whole question was very poorly handled, when it should have been a 'gift'.

CANADIAN CERTIFIED GENERAL ACCOUNTANTS' ASSOCIATION
AUDITING 557 EXAMINATION
MARCH, 1980
SUGGESTED SOLUTIONS

Marks | Time: 3 Hours

9 Q. 1. (a) 557-1:6 to 7

(1) 1. GAAP have been spelled out in one place or another for most situations that a public accountant is likely to encounter.

(1) 2. By contrast, the criteria for evaluating performance in an operating unit may be stated only vaguely, if at all.

(1) 3. The auditor may have to develop appropriate criteria himself.

(b)

(1½) 4. GAAP have been established over a great many years and are generally accepted -- and may be accepted for the majority of situations – as "gospel."

(1½) 5. By contrast, a managerial auditor should be prepared to question whether performance criteria are inappropriate or out-of-date or actually incorrect (eg. an incorrect interpretation of a law).

(1½) 6. Nevertheless, he must refrain from substituting his own criteria for those of the organization under review.

(c)

(1½) 7. In a public accountant's report, the auditor is required to refer specifically to the consistent application of GAAP. Whether the reader is particularly informed on the details of GAAP or not, the auditor attests to the fact that GAAP are being followed in preparing the financial statements.

(2) 8. By contrast, the criteria for judging performance naturally differ from one organizational unit to another -- and from one period to another. The auditor should make sure that the current criteria for measuring results are stated in the audit report.

6 Q. 2. Text p. 6.

(2) 1. **Systematic** implies that the auditor will conduct his reviews on some sort of planned basis. The auditor does not just carry out an audit when requested in the nature of a consultant.

(1) 2. Over a period of time, the auditor would review all significant organizational units.

(2) 3. **Independent** implies that the auditor conducts his audit with an objective view. The auditor must not be required to further the interests of any particular functional authority in the organization.

(1) 4. The auditor is an employee of the organization and is, therefore, not 'independent' in the sense that a public accountant is.

(1½) 5. **Service to management** implies that the auditor seeks to help all levels of management discharge their responsibilities.

(1½) 6. Although the auditor undertakes to aid the level of management being audited, since the auditor also serves the next level of management upward, he must report the facts as he finds them to that level.

14 Q. 3. 557-2:6-7

(a) Overall computer feasibility study -- key features:

(1) 1. overall planning to embark on a program of computerization; precision of these plans.

(1) 2. understanding of all costs entailed in converting to EDP methods.

(1) 3. extent of commitment of resources for several years into the future.

(1)
(1)
(1) 4. choice of initial applications; identification of problem areas that could really benefit from the application of EDP; all departments and potential users consulted.

(1) 5. possibility that 'cleaning up' existing systems is all that is required.

(1) 6. cost/benefit studies.

(1) 7. long-term strategy for use of EDP resources.

(b) Management involvement -- look for the following:

(1) 8. 'lip-service' instead of real involvement.

(1) 9. understanding of potential, along with the pitfalls in EDP by various levels of management.

(1) 10. extremes from infatuation with EDP to total lack of interest or fear.

(1) 11. formation of EDP committee to set policies and priorities on EDP.

(½) 12. user's knowledge about EDP technology.

(½) 13. continuing interest and involvement after projects started; follow-up.

(c) Project selection-key features of the procedure:

(1) 14. formal system for submitting, reviewing and approving EDP proposals.

(1) 15. proposals originated and submitted by users to EDP committee who make selection and assign priorities.

(1) 16. proposals include cost/benefit analysis, payback period, etc.

(1) 17. parties concerned indicate approval by signing the proposal document.

(1) 18. auditor review selected projects to see that they have been prepared in conformity with established policies.

20 Q. 4. (a) Text p. 87-94, 158
557-3:1. 4, 5

(2) 1. Accounts payable clerk prepares tape list of net amounts on invoices. Might also prepare an additional tape list of suppliers' codes to provide a "hash" total for control purposes.

(1) 2. Enter tape total(s) in control book maintained in accounts payable department.

(1½) 3. Prepare duplicate transmittal slip showing date, description of the data, tape total(s) and an ascending batch number.

(1½) 4. Senior clerk reviews foregoing, checks invoices to tape, scrutinizes invoices for correct and complete handling and checks tape to entry in register. Retains duplicate of transmittal slip and forwards invoices, tape and transmittal slip to datacentre I/O control clerk.

(2½) 5. Datacentre I/O control clerk enters total(s) from tape/transmittal slip and passes batch of invoices out for key-entry and edit run. Agrees edit run total with control book entry.

(2½) 6. Datacentre I/O clerk checks total of printout for load run to control book, sees that invoices are stamped "Processed by Datacentre" and forwards printout and invoices to accounts payable department.

(2) 7. Accounts payable senior clerk checks total from load run to control book. Investigates any difference. (We are to ignore rejected data.) Possibly checks some invoices to the detailed load run printout.

(1) 8. Datacentre I/O clerk checks total of weekly cheque run to see that it agrees with the sum of the week's daily batches entered in the control book.

(1) 9. Recipient of cheques (NOT accounts payable department) agrees run total with sum of daily invoice totals in the accounts payable department control book.

(b)

(1) 10. On a test basis, compare entries in accounts payable control book with relative entries in datacentre control record.

(1½) 11. Test check additions in both control books, i.e., see that daily invoice batches add to the weekly cheque run.

(1½) 12. On a test basis, trace control totals from load and cheque runs to the control records.

(3) 13. On a test basis, trace some invoice amounts as shown on voucher portion of cheque copies to actual invoices in accounts payable department files. See that the invoices have been stamped 'Processed by datacentre' and bear evidence of processing and approval by accounts payable department.

(2) 14. Enquire into the routines for maintaining the datacentre control records. See that the I/O control clerk **does** function independently of computer operators.

15 Q. 5. 557-7:2
Text pp. 176-7

(1½) 1. In the case of a request for an item not presently stocked, what level of approval is required? Who decides, and on what basis, whether to now stock the item? Who has the final authority for specifications for the item and for selection of a supplier?

(1½) 2. In the case of items carried in stock, who has the responsibility for determining the minimum-maximum quantities and the order quantity? On what bases are these quantities determined?

(1½) 3. In the case of purchases of services, who has the responsibility for passing judgment on the quality of the service? Who selects the supplier?

(1½) 4. In the case of purchase of capital assets, is there a clear chain of authority from the approved capital budget?

(1½) 5. Do individual buyers have limits on the size of purchase orders which they may sign in terms of unit value, quantity, total value or time span of contract? Is it possible to measure the performance of those in the purchasing department against clear standards?

(1½) 6. What is the company's formal bid policy and when is it to be applied? Can it be followed? Is it being followed? Are there records to show how the policy was followed in individual cases?

(1½) 7. In the case of multi-plant operations, is there a policy which coordinates purchasing activities so as to achieve the best overall prices, services, etc. for the organization?

(1½) 8. What is the policy regarding "change orders?" Who has the authority to accept a higher price, change in quality, quantity, or delivery time?

(1½) 9. Is the purchasing department expected to deal with a purchasing request within a stated period of time and, if unable to complete within that time, to so advise the requesting department?

(1½) 10. Is there any indication of favoritism toward certain suppliers? Under what conditions are orders divided among several suppliers? Are successful bidders so advised?

(1½) 11. In the case of "Confirming" orders (purchase orders confirming previously telephoned orders), does it appear that some other department has usurped the responsibilities of the purchasing department?

(2) 12. Are F.O.B. points and routing instructions specified on the order, and are the instructions being followed? Does the purchasing department work in close relationship with the traffic department in determining the best shipping instructions?

(1½) 13. Is there any evidence that the markets are being continually studied for better sources of supplies, or for more appropriate materials? Are supplies being specified in qualities which are either too high or too low for the company's requirements?

- Other possible points from the referenced sources.

14 Q. 6. 557-8:4-6
Text 162-3

(a) Organization of the department:

(1½) 1. Current objectives of the sales department as a guide to the several activities of the salesman, eg. is the goal to obtain high saturation in selected areas?

(1½) 2. Number of customers per salesman along with the relative physical areas serviced by each salesman.

(1½) 3. Number and location of salesmen reporting to each sales supervisor.

(b) Control over the realization of sales objectives:

(1½) 4. Goals (and plans to meet those goals) for individual salesmen and the department as a whole.

(1½) 5. Sufficiently frequent and detailed reporting of sales by product, territory, salesman, customers -- and various combinations of these in accordance with the way the goals were specified.

(1½) 6. Review results in comparison with goals for the various organizational units and take action to remedy the deficiencies.

(c) Control over salesmens' efforts:

(1½) 7. Goals for increased sales to be achieved by developing new or existing customers.

(1½) 8. Value analysis of existing customers to determine the amount of sales effort justified taking into consideration volume, size of individual orders, cost of calling on customers, etc.

(1½) 9. Reports (in the form of call records) from salesmen (in conjunction with the foregoing) used to indicate when to increase or decrease the solicitation of individual customers/prospects.

(d) Control over selling expenses:

(1½) 10. Budgets by class of expense for each salesman.

(1½) 11. Prior approval by supervisor for major, controllable costs such as major entertainment costs, more distant travel, etc.

(1½) 12. Review of incurred costs in relation to benefits received.
This also envisages item 8 above.

12 Q. 7. 557-9:2-4
Text 196-7

Any 4 of the following:

(3) 1. Self-insurance (i.e. retained risks) is used effectively, but at the same time does not result in excessive exposure or under-estimation of possible losses.

(3) 2. Capital assets adequately insured in the light of rising current values and the effect of insurance based on depreciated cost rather than replacement cost.

(3) 3. Possibility of specific exclusions from the coverage – e.g., specified assets or specified perils.

(3) 4. Possibility that assets are insured twice, or not at all, e.g., leased equipment insured by owner and/or lessee; products in transit to another location or while in the hands of a bailee -- see that they really are covered.

(3) 5. Business interruption insurance to indemnify losses due to suspension of operations following damage to plant and equipment by fire.

(3) 6. Possibility that changes in insurable values may be reported incorrectly, e.g., capital assets that are fully depreciated but still in use; other valuable assets that were expensed; construction in progress; etc.

10 Q. 8. (a) Text pp. 60-69; 36-39

(1) 1. Decide on the purpose of the report, e.g., provide information about a situation, secure action, etc.

(1½) 2. Assemble the relevant facts making sure that you have **all** the necessary facts.

(1½) 3. Draft the report and review this, with the auditee, making sure that all statements are backed up by documented findings in the working papers.

(1) 4. Review and polish the draft into final report.

(1) 5. Issue report to the designated recipients.

(b)

(½) 1. Brief statement of scope of audit and purpose of the report.

(1) 2. Concise but informative summary -- one or two pages.

(1) 3. Sections devoted to each of the auditor's major findings.

(3½) 4. Each section should provide necessary background data, present the findings, state any agreed upon remedial steps, any disagreements by the auditor, and areas where corrective action is still needed.

(1) 5. The auditor's conclusions either on the audit as a whole or on each item dealt with as in point no. 4.

100

END OF SOLUTIONS

PAGE 7 OF 7

CANADIAN CERTIFIED GENERAL ACCOUNTANTS' ASSOCIATION

AUDITING 557 EXAMINATION

JUNE 1980

Marks

Time: 3 Hours

5 Q. 1. Distinguish clearly between **"effectiveness"** and **"economy"** as **objectives** of an organizational unit being audited.

9 Q. 2. Many organizations which employ managerial auditors are very concerned that they "pay their way". Briefly describe 3 basic ways in which the function of managerial auditing can be cost-effective. DO NOT give examples of specific "success stories" where auditors turned up specific opportunities for cost reductions, but discuss the matter in more basic terms.

10 Q. 3. You have been asked to evaluate the function of selecting projects for applying EDP resources. You plan to take a recently approved EDP project and subject it to a set of penetrating questions.

Required:

Set down five major questions — or groups of two or three related questions each — that you would incorporate into a questionnaire for this study. Provide the questions that you think are the most significant for this purpose. Marks will be awarded on the basis of depth of the questions and their indication of your perception of the key issues.

12 Q. 4. Explain fully the purpose of each of the following controls in EDP operations and necessary features to assure their effectiveness as controls:

(a) Datacentre data control record.

(b) The scheduling function within a datacentre.

(c) Computer-produced logs of jobs run on the computer.

(d) A "librarian" in the datacentre.

14 Q. 5. "The performance of management is nowadays judged more and more on the basis of return on investment." Show how you would apply this concept in designing a questionnaire to direct a review of the inventory operations and levels of stocks maintained in a typical manufacturing enterprise. Provide six groups of two or three related questions each.

PAGE 1 OF 2

15 Q. 6. You have been asked to evaluate the effectiveness of the quality testing program of a typical manufacturing enterprise. Set out in some detail the major features of the system that you would look for and investigate.

15 Q. 7. You have been assigned the task of reviewing the adequacy of the procedures and controls over the acquisition of capital assets in your company. You are to approach the assignment from the "managerial auditor" viewpoint.

Required:

Set out five main audit PROCEDURES necessary to carry out this assignment. DO NOT give **questions** or limit yourself to procedures of a basically financial nature (such as tracing suppliers' invoices to the records, etc.). Exclude the problems of construction projects.

10 Q. 8. Set down in some detail **five** main points you would look into when reviewing the **basic methods** used in preparing a sales forecast.

10 Q. 9. Briefly outline four topics of the greatest importance that you would review in connection with a managerial audit of the traffic function of a manufacturing enterprise.

100

END OF EXAMINATION

CANADIAN CERTIFIED GENERAL ACCOUNTANTS' ASSOCIATION
AUDITING 557 EXAMINATION
JUNE, 1980
EXAMINER'S COMMENTS

Specific

Q.1 Generally well handled. Some answers were extremely and unnecessarily verbose.

Q.2 Answers were shallow. Few candidates got across the nature of the situation that provides the opportunity for the auditor to be cost effective. A number of 'fringe' answers were rewarded with some marks. In spite of the warning in the question, 10% of the candidates wrote only about specific examples, such as participation in EDP project selection. Only a rather small percentage offered the first item in the suggested solution.

Q.3 Some candidates discussed how to buy a computer. Most wrote about selecting projects to computerize, notwithstanding the explicit wording (which has been used before) to deal with the 'function of selecting projects for applying EDP resources.' When we then refer to using an EDP project as a focus, they forget the first sentence. Very few answered the question.

Q.4 Most candidates overlooked the emphasis in the question on 'effectiveness as controls.' Hence, candidates described procedures in detail without pinning down the essential controls.

(a) Few candidates mentioned the need for independence from computer operators.

(b) Many candidates have the mistaken idea that preparing a schedule assures that unscheduled jobs will not be run. Many candidates confuse scheduling and controlling — running of jobs vs. data control.

(c) Very few candidates noted that the computer-produced log is tamper-proof. There was also the confusing of logs of computer operations (= jobs run) and data control.

(d) Candidates generally referred to issuance of tape and disks to 'authorized persons' whereas the real control is the issuance of tapes and disks *as authorized by the schedule of jobs.*

Many candidates referred to all manner of possible duties for the librarian without dealing with the vital subject of 'control'. Auditing students should have EDP controls down cold. In recent exams, this question has been practically a gift.

Q.5 Most candidates ignored the first part of the question, simply reviewing stock and inventory. E.g., the candidates gave many specific points on storage but failed to relate these to either policy or to effective management. In a sizable minority, it was apparent that the candidates did not know what ROI means.

Q.6 Quite well done. This question appeared on a recent exam.

Q.7 A majority of the candidates missed the phrase 'procedures and control' and described the audit of a capital asset acquisition instead. These candidates just don't seem to be able to grasp the concept of a 'process' for doing something, as distinct from what you would find when you applied the process. We want an auditor to determine whether the 'process' is comprised of effective and economical procedures and controls. Many candidates gave 'questions' in spite of the specific instructions to the contrary. Those who answered the question as given, did reasonably well.

Q.8 Not well answered. Many candidates dwelled at length with such questions as pricing of product, salesmen's territories and did not answer the question asked.

Q.9 Poorly answered. Many candidates displayed an inadequate knowledge of the traffic function. They referred only to warehousing and stores and omitted routing and claims. Most candidates gave no consideration to the coordination between traffic and the other related departments of purchasing and sales.

CANADIAN CERTIFIED GENERAL ACCOUNTANTS' ASSOCIATION

AUDITING 557 EXAMINATION

JUNE 1980

SUGGESTED SOLUTIONS

Marks **Time: 3 Hours**

5 Q. 1. 557 — Appendix 1:15-16

(2) 1. **Effectiveness** is a measure of how successfully the activities of the unit deal with what the organization as a whole (or just this particular unit) is trying to accomplish.

(2) 2. **Economy** is a measure of the cost involved in attempting to accomplish the organization's purposes.

(2½) 3. An organizational unit (or entire organization) might be very effective in choosing activities that would realize its goals but it might fail to do so economically; it might be very wasteful in its use of resources.

9 Q. 2. Text pp 203-4 and the course in general.

(2) (2) 1. If the internal audit staff is suitably qualified and enjoys considerable independence, external auditors may rely on them for audit reviews of specific units. This reduces the cost of the external audit while the internal auditors can simultaneously perform a more detailed and management-slanted review of the unit.

(2) (2) 2. Very often line supervisors lack the time or analytical ability to thoroughly probe the operations of his/her department. As a staff person, the internal auditor is in a position to carry out all sorts of pertinent studies unhampered by day-to-day administrative demands — and thereby bring to light opportunities for improvement in operations and control.

(2) (2) 3. Managers — particularly senior managers — are increasingly working out of sight of the activities for which they are responsible. They are forced to rely more and more on increasingly sophisticated controls. Managerial auditing serves two purposes for these managers: provide objective reviews of the effectiveness of other controls and conduct its own in-depth reviews of the effectiveness and economy with which operations are being carried out.

10 Q. 3. 557-2:7 to 9

(1½) (2) 1. Is selection of projects handled by a computer committee made up of senior line managers? Has this committee spelled out policies and procedures governing the way in which proposals will be presented and the requirements in the way of economic justification of the project?

(1) (1) (1) 2. What are the functional and informational requirements of the system? Why is a new and automated system being considered? What is inadequate about the existing methods?

(1) (1) 3. What weaknesses of the existing system will the proposed new system overcome? What existing problems will it not solve?

(1½) (1) 4. What is the economic and technical feasibility of the project? Do its cost-benefit features meet company requirements?

(1) (1) (1) 5. What alternatives are there to the proposed system? Can its benefits be achieved by any other means? Have all reasonable alternatives been explored?

Other possibilities from the referenced passages in the lesson notes.

12 Q. 4. 557-3:1 to 8

(1) (a) 1. Provide a record of incoming data — including control totals — for processing.

(1½) 2. The figures in the datacentre control record provide control totals with which load and printout runs must agree

(1½) 3. The clerk maintaining this record must be organizationally independent of the computer operators.

(1½) (b) 4. Provide a list of jobs authorized to be run during a forthcoming specified period — say, a day or week.

(1½) 5. Provide a control (in conjunction with item (c)) to prevent the running of unauthorized jobs.

(1½) 6. Must be prepared by someone independent of computer operators and approved by a senior supervisor in the datacentre.

Students may also present the following point:

(1½) 7. Provides a means to use EDP datacentre resources most efficiently and to reflect, as far as possible, the priorities of the several jobs that have to be run in a given time period.

(1) (c) 8. Provides a tamper-proof listing of all jobs actually run on the computer.

(1) 9. This may also indicate the time used by each job for billing purposes.

(1½) 10. When compared with the authorized schedule by someone independent of computer operators this provides a control to ensure that only authorized jobs are run.

(1½) (d) 11. Provides control over files (tapes and disks) by limiting physical access to a designated "librarian" who is independent of the computer operators.

(1½) 12. In conjunction with the scheduling function, provides control over the release of tapes and disks to computer operators and limits release to only those tapes and disks necessary to run authorized, scheduled jobs.

(1) 13. Care must be taken that the controls are not invalidated during times when there is no librarian on duty.

14 Q. 5. 557-4:4 to 7 Text pp 141-145

(1½) (1½) 1. Is there a clear, written policy on the current objectives of inventory management? Are any of the terms contradictory and hence impossible to carry out as expected?

(1½) (1) 2. Do the various procedures established to control inventory levels appear appropriate for achieving the desired policy objectives? In what areas do appropriate procedures appear to be lacking?

(1½) (1½) 3. How effective does it appear that the procedures have been in achieving the stated policy? How do the real needs for inventory, as shown by manufacturing and/or sales records, compare with the stock levels that are actually being maintained?

(1½) (1) 4. Have techniques such as "order points" and EOQ formulas been used to maintain individual inventory items at optimum levels? Do these order points and formulas reflect current conditions?

(1) (1) 5. What has been the experience with inventory stock-outs? Incidence of lost business or shut-down of production lines due to inventory shortages?

(1½) 6. Is control — through such means as in item 4 — applied effectively and economically, e.g. limited to those inventory items with significant turnover and/or investment?

(1½) (1½) 7. Is the manufacturing process well planned and controlled so as to minimize the build-up of work in process inventory and proceed with a minimum of elapsed time from receipt of raw materials to sale of finished product?

Other possible points from the referenced sources.

15 Q. 6. 557-5:5

(2) 1. Evaluate the effectiveness of the quality control program in the sense of adequate and timely feed-
back so that off-standard production can be corrected promptly. Are the check-points placed so as
(2) to achieve maximum effectiveness in early detection of sub-standard raw materials or production?

(1) 2. See that reporting of test results is prompt. See that samples are adequately identified so that the test
(1½) results may be related to the correct shift, batch, etc. The auditor should enquire whether latest
(1) testing equipment/methods are being used.

(2) 3. See that appropriate and timely summary reports are produced showing results and trends in
(1) quality control measured against some objective or criteria. How meaningful are these reports and
(1½) do they go to the right persons? In the case of sub-standard performance, is anyone taking any
positive action?

(1½) 4. See that the sampling of output is carried out on a consistent basis. It should not be done only when
(1) "someone is available". There must be a policy which calls for a planned program which is, in fact,
(1½) being carried out. The auditor should check that the output from **all** shifts, **every day**, is being
sampled and tested equally.

(2) 5. See that adequate but not excessive samples are tested, and selected in accordance with statistical
(2) (random) sampling techniques. The auditor should satisfy himself by actual observation that the
samples are being taken from the proper location in the plant, to ensure that samples are not
"biased" in any way.

15 Q. 7. 557-6:1 to 4 Text pp 147, 8

(1) 1. Examine the published policies and procedures for submitting and approving capital asset projects.
(1) See whether these seem reasonable, employ sound criteria for evaluating, are complete, and appear
(1) able to provide adequate controls over the acquisition of capital assets.

(1½) 2. Examine the capital asset budget for the current year, and the budgetary reporting system. Test
(1½) check the compilation of the budgetary control reports, see that they are factual, complete, timely
(1½) and sent to appropriate managers. Pick out some representative indicated over-runs and inquire
what action has been taken by management.

(1½) 3. Select a sample of capital asset projects and review the supporting documentation for compliance
(1½) with company policies and procedures. Check the various computations and assumptions. See that
(1) the documents bear appropriate and required approval signatures. Look for evidence of attempts to
(1) circumvent the hierarchy of approvals by cutting large projects into two or smaller ones.

(1½) 4. For the capital asset projects selected in No. 3, test check the issuance of work orders and purchase
(1) orders that actually effect the acquisition. See that these bear the required approvals. Look for
(1) evidence of efforts to start jobs before approval has been given.

(1½) 5. Test check the recording of charges against individual work orders and projects. See that recoveries
(1½) such as proceeds of sale of assets replaced are appropriately recorded.

10 Q. 8. 557-8:3

(1) 1. Enquire as to the propriety of the current method of forecasting and whether other methods have
(1) been tested or considered. Determine what the possibilities are for computational error.
(1)

(1) 2. Calculate the cost in terms of time and money of preparing the forecast and enquire if management
(1) is satisfied with the return on this cost.

(1) 3. Determine the assumptions used in preparing the forecast and see if they are known to and accepted
(1) by all persons concerned with the forecast.
(1)

(2) 4. If use is made of exponential growth rates (based on such indicators as increase in GNP, industry forecasts, or other economic factors), consider how appropriate they are for your company's future outlook.

(1) 5. Review discrepancies between previous forecasts and actual results. See if they were investigated to
(1) determine if there are fundamental and recurring errors in the forecasting. Are the forecasts con-
(1) tinually under- or over-optimistic? What is being done to correct this situation?
(1)

Other possibilities from the referenced source.

10 Q. 9. Text pp 186-8

(2) 1. Review the effectiveness and degree of co-ordination between the traffic, purchasing, and stores
(1½) departments. Review similar relationship between traffic and sales in connection with shipments to customers.

(1½) 2. See that standard routings are distributed to all concerned, that the traffic department determines
(1) that prescribed routings are being followed, and that non-standard premium-cost routings are
(1) really necessary (in cases where they are used) and that they gain the expected advantage.

(2) 3. See that suppliers follow the routings which are specified by the traffic department and which are
(1½) written into purchase orders. Where a supplier ships goods by a more expensive mode than that specified in the purchase order, find out if the company has received an allowance for the increased cost of transportation.

(1½) 4. Examine the records and procedures for spotting and reporting incoming and outgoing trucks and
(1½) railway cars. What steps are taken to minimize demurrage and similar charges?

(1½) 5. Review the procedures for controlling transportation claims up to the point of collection or can-
(1) cellation. Are cancellations based on sound reasons and are they properly authorized? Have all
(1) company locations been provided with written procedures for filing and handling claims?
(1)

Other possible items from the referenced source.

100

END OF SOLUTIONS

CANADIAN CERTIFIED GENERAL ACCOUNTANTS' ASSOCIATION

MANAGERIAL POLICY 600 EXAMINATION

JANUARY, 1980

Marks | **Time: 3 Hours**

15 Q. 1. Bureaucracy is the most common organizational form used in the business world at present.

REQUIRED:

(4) (a) What are the basic principles of this organizational form?

(5) (b) What are the criticisms against it?

(6) (c) What are three alternative structures that have been proposed and what are their basic principles?

6 Q. 2. Mintzberg suggests three modes in which organizations make strategic decisions.

REQUIRED:

What are these three modes and what are the major characteristics of each?

10 Q. 3. Levitt, in his article "Marketing Myopia", argues that it is essential for business to view itself as customer satisfying rather than goods producing.

REQUIRED:

Explain why this is so.

12 Q. 4. Accounting Manager:
"You know a major part of the accounting department here would run a lot better and a lot easier if those salesmen would learn to fill out the paperwork and sales orders and check for the credit ratings on potential customers before promising the moon! My people are constantly having to chase down salesmen because of incorrect prices or poor credit risks or a host of other problems."

Sales Manager:
"Those accountants are a pain in the butt! All they have to do is sit in the office, shuffle paper and bug my salesmen. They don't seem to understand that selling is a high pressure job and my guys can't always be perfect on prices and credit risks. How can this company make a profit if accounting is reversing sales to customers on the grounds that their credit ratings are too low to warrant the terms we gave them. This is a competitive market and if we don't give them those terms somebody else will and we lose the business."

REQUIRED:

According to Lorsch and Lawrence there are four potential reasons for this conflict. What are these reasons and what can be done to correct the above situation?

PAGE 1 OF2

23 Q. 5. According to McCarthy, Minichiello and Curran the strategic process is an on-going three-phase phenomenon consisting of (a) strategy formulation, (b) strategy implementation, and (c) strategy evaluation. Within this framework, top management must set objectives and establish plans and policies for their attainment. They must establish the product-market scope of their operation and organize and staff the firm so as to ensure its survival. Through a planning and control system, they must look continually ahead and back in order to select the right opportunities, make the right decisions, and solve the right problems.

REQUIRED:

(14) (a) What are the major elements which must be taken into consideration and/or established in the strategy formulation stage?

(5) (b) What are the major requirements of strategy implementation?

(4) (c) Insofar as evaluation is concerned, what is the role of a budget in this process?

12 Q. 6. Krueger and Kohlmeier discuss the relationships between financial modelling and "what if" budgeting and compare these processes to more traditional processes of budgeting in their article, "Financial Modeling and What If Budgeting."

REQUIRED:

(4) (a) What contributions to planning can be made by financial models?

(5) (b) What are some typical budgeting problems?

(3) (c) What are the benefits of financial models and "what if" budgeting?

12 Q. 7. In establishing a strategy for control in his organization, what questions should a manager ask himself and how should the answers to those questions influence the strategy for control which he chooses?

10 Q. 8. Using materials presented in the course write a brief essay detailing the arguments for business assuming social responsibility.

100

END OF EXAMINATION

PAGE 2 OF 2

CANADIAN CERTIFIED GENERAL ACCOUNTANTS' ASSOCIATION

MANAGERIAL POLICY 600 EXAMINATION

JANUARY, 1980

SUGGESTED SOLUTIONS

Marks **Time: 3 Hours**

15 Q. 1.

(4) (a)
(i) specialization of work;
(ii) limited span of management;
(iii) unity of command;
(iv) chain of command or delegation of authority

(5) (b)
(i) too mechanistic and ignores major facets of human nature;
(ii) formal directives and procedures hinder communication;
(iii) too structured to adapt readily to change;
(iv) pays the job and not the man;
(v) relies on coercion to maintain control;
(vi) inhibits innovation;
(vii) out of date with today's needs;
(viii) organization's goals frequently incompatible with members' goals;
(ix) job defensive behaviour encourages make work.

(One mark each to a maximum of five)

(6) (c) (a) Behavioural model assumes the objective of economic productivity but adds employee satisfaction. Emphasis is on horizontal systems in which control is loose, power diffused and centres of decision making widespread.

(b) The organic model-organizations will be temporary focusing on current problems and organic relationships between members.

(c) The team model-combination of bureaucracy and the organic model.

(d) The contingency model. Organization designed according to which variables or contingencies are important to the organization. Usual major variables are the manager, the work, the external environment and the employees.

(MARKING KEY: 2 marks each for any 3 of the above.)

6 Q. 2.
(i) the entrepreneurial mode where one leader takes bold, risky actions on behalf of his organization;
(ii) the adaptive mode in which there are no clear goals and the organization adapts to its environment and changes therein in small, disjointed steps; and
(iii) the planning mode where formal analysis is used to plan explicit, integrated strategies for the future of the organization.

10 Q. 3. Such a perspective prevents the occurrence of marketing myopia which consists of:

(i) the belief that growth is assured by an expanding and ever more affluent population;
(ii) the belief that no competitive substitute for the industry's product is available or possible;
(iii) too much faith in mass production and the advantages of rapidly declining unit costs as output rises;
(iv) preoccupation with products which lend themselves to carefully controlled scientific experimentation, improvement, and manufacturing cost reduction. With a customer needs perspective, the firm works back from the customer to delivery to production to location of raw materials.

12 Q. 4. The potential sources of such conflict are **(2 marks each)**:

(i) differing orientation to the external environment;
(ii) differing departmental structures;
(iii) differing orientations toward time;
(iv) differing orientations toward each other.

The solutions to these sources of conflict are **(1 mark each)**:

(i) a co-ordinating dept.;
(ii) a cross functional co-ordinating committee;
(iii) liaison individuals;
(iv) short term project teams with representatives from each of the conflicting groups.

23 Q. 5.

(14) (a) The basic influences are:

(i) external environment;
(ii) internal resources;
(iii) personal values of decision makers;
(iv) responsibility to society.

The strategic objectives to consider are:

(i) survival;
(ii) growth rate and diversification;
(iii) profitability;
(iv) market share;
(v) social contribution of the firm.

The major policies include:

(i) product-market scope;
(ii) bases of competition;
(iii) allocation of scarce resources within the firm;
(iv) new opportunities;
(v) time horizons **(1 mark each)**.

(5) (b) The major requirements for implementation are:

(i) organize;
(ii) plan;
(iii) establish control and motivation systems;
(iv) staff the organization;
(v) establish necessary information flows **(1 mark each)**

(4) (c) The budget converts general strategy statements into specific plans of action measured financially. It is related to control as it is the fundamental guideline for what the organization should do. Thus, it is the benchmark against which actual performance is compared. This comparison is the essential feature of the control process and is the first step in evaluation.

12 Q. 6.

(4) (a) (i) the development of models forces all participants to take a top level, overall viewpoint on the organization;
(ii) the major thrust will be to discover and use relationships between key operating variables thus leading to improved understanding of the business;
(iii) models project over several time periods thus forcing consideration of lead/lag relationships;
(iv) it forces consideration of whether important sectors of the business are growing or declining.

(5) (b) (i) it is time consuming;
(ii) prone to clerical error due to its detailed nature;
(iii) clerical effort required exhausts people and leaves little enthusiasm for analysis;
(iv) few companies keep adequate historical data to do good budgeting;
(v) top management frequently arbitrarily change budgets to reflect their performance expectations.

(3) (c) (i) facilitates the preparation of preliminary budgets;
(ii) facilitates analysis by providing management with quick, comprehensive responses to new alternatives;
(iii) not only serves traditional control purposes but allows on-going analysis throughout the year.

PAGE 3 OF 4

12 Q. 7. The questions to be asked are: **(1 mark each)**

(i) What kind of managerial style do I use — participative or directive?
(ii) What kind of climate, structure, and reward system does my organization have — participative or non-participative?
(iii) How accurate and reliable are the measures of subordinate performance — accurate or inaccurate?
(iv) Do my subordinates wish to participate in decision making — high desire or low desire?

The implications for control strategies are as follows: **(2 marks each)**

(i) if managerial style is directive and measures of employee performance are accurate, then a strategy of external control can be successfully employed;
(ii) if managerial style is participate, any climate, structure, and reward system encourage employee participation, and subordinates have high desire to participate then a strategy of internal motivation can be successfully employed;
(iii) if managerial style is directive but measures of employee performance are inaccurate, serious control problems are likely to arise;
(iv) in all other circumstances a modified form of internal motivation can be successfully employed.

10 Q. 8. The points necessary to answer this question can be found in Davis, "The Case for and against Business' Assumption of Social Responsibility" and Richman, "Corporate Social Responsibility and Enlightened Management". Marks will be available on the basis of ½ mark for each point to a maximum of 4 marks. The remaining 6 marks will be awarded for elaboration of these points and organization of the answer.

100

END OF SOLUTIONS

CANADIAN CERTIFIED GENERAL ACCOUNTANTS' ASSOCIATION

MANAGERIAL POLICY 600 EXAMINATION

MARCH, 1980

Marks **Time: 3 Hours**

10 Q. 1. Using materials from the course write a brief essay **in favour** of business assuming social responsibility.

17 Q. 2. Personnel Manager:

"I just don't understand it. I was sure that new incentive/bonus plan we implemented in the Brandon plant would substantially improve productivity. But it hasn't! Oh sure, some of the employees are producing more (and getting paid more) but most are producing at the same levels they always have (and getting paid the same) and some are even producing less (and getting paid less). It beats me!"

Required:

According to Flowers and Coda, employee values differ enough to explain such phenomena.

(14) a) Elaborate on the various value systems discussed by them.

(3) b) Which ones explain each of the employee responses referred to by this manager?

20 Q. 3. Paine and Naumes distinguish between what **should** happen and what **actually does** happen in the organization during strategy formation.

Required:

Compare and contrast these two organizational states.

15 Q. 4. The classical bureaucratic organization continues to be the most common organizational structure used.

Required:

(4) a) What are the basic principles of this form of organization?

(5) b) What are the criticisms labelled against it?

(6) c) What alternatives have been proposed and what are their basic principles?

11 Q. 5. Steiner talks about points of view and structure in "The Critical Role of Management in Long-Range Planning". Identify and explain briefly.

13 Q. 6. Krueger & Kohlmeier discuss the relationships between financial modelling and ''what if'' budgeting and compare these to more traditional processes of budgeting.

Required:

(4) a) What contributions to planning can be made by financial models?

(5) b) What are some typical budgeting problems?

(4) c) What are the benefits of financial modelling and ''what if'' budgeting?

14 Q. 7. Theodore Levitt, in ''Marketing Myopia,'' argues, ''The view that an industry is a customer-satisfying process, not a goods-producing process, is vital for the businessman to understand.''

Required:

(8) a) Explain why such a view is vital.

(6) b) What external environmental forces can be used as an aid to identifying customers and their needs?

100

END OF EXAMINATION

CANADIAN CERTIFIED GENERAL ACCOUNTANTS' ASSOCIATION
POLICY 600 EXAMINATION
MARCH, 1980
EXAMINER'S COMMENTS

General

Results of this exam are substantially better than they have been in the past. The grammar and organization of answers was greatly improved over past efforts and students knew the material.

Specific

Q.1 Done very well.

Q.2 Done very well.

Q.3 Students who did poorly did not identify strategy making as a continuous process and/or did not talk about the effects of political behaviour on information availability.

Q.4 This was the most poorly done question. Students continue to think bureaucracy is a government organization and free enterprise is therefore an alternative. In addition, the use of examples of organizational forms is not an acceptable substitute for understanding the principles of those forms.

CANADIAN CERTIFIED GENERAL ACCOUNTANTS' ASSOCIATION

MANAGERIAL POLICY 600 EXAMINATION

MARCH, 1980

SUGGESTED SOLUTIONS

Marks

Time: 3 Hours

10 Q. 1. The points necessary to answer this question are to be found in Richman "Corporate Social Responsibility and Enlightened Management" and Davis, "The Case for and against Business Assumption of Social Responsibility." (Marks to be awarded on the basis of ½ marks for each point, to a maximum of 4 marks, and six marks for elaboration and organization of the answer.)

17 Q. 2.

(14) a) The value systems are:

(i) reactive — no value system, person reacts purely to sense stimuli.
(ii) tribalistic — values easy work, friendly people, fair play and a "good" boss. Doesn't like responsibility, prefers to be told exactly what to do.
(iii) egocentric — likes good pay and wants the boss to stay off his/her back. Doesn't like work which ties him/her down and works only for money. Merit and bonus systems do not motivate such people.
(iv) conformist — likes job security and well defined job rules. Likes a boss who tells what to do and rarely changes his/her mind. Money is an important motivator.
(v) manipulative — believes compensation should be based on results and likes a job which allows wheeling and dealing. Likes to have responsibility for his/her own performance.
(vi) sociocentric — prefers working with people in a friendly environment. Friendly relationships more important than task accomplishment.
(vii) existential — these employees prefer work which requires initiative and imagination. They like responsibility and money can be a motivator.

(3) b) Those who produce more for more money will be conformist, manipulative, or existential value oriented. Those who produce the same irrespective of financial inducement will be egocentric or sociocentric value oriented. Those who produce less will be egocentric value oriented.

20 Q. 3. What should happen is that choices should be made amongst competing alternative strategies in response to limited resources and capabilities. The choice should be rational and should include the following steps: (i) identification of market niche; (ii) match internal strengths to external possibilities; (iii) identify and avoid weaknesses and threats; (iv) work within a well defined organizational structure.

The common thread to every good strategic process is that it is both continuous and creative. Organizations can not treat strategy as a once-and-for-all issue that is dealt with at the start-up of the company and then assumed from that point forward. It must be seen as ongoing and as a major mechanism for the integration of the various activities of the company.

What actually happens is that organizations are vehicles for people to engage in covert political behaviour. This produces the following behaviours: (i) coalition formation; (ii) conflict over unshared goals; (iii) bargaining and negotiation to maintain a coalition; (iv) conservatism to protect current power position.

These types of behaviour all have the effect of distorting information relevant to competing alternatives and the choice process. Thus, not only is the information concerning the various possible alternatives inaccurate or inadequate, but the procedure for choosing amongst them may be less than rational due to the use of power by winning coalitions.

(1 mark for identifying each of the behaviours, 1 mark for elaborating on each, 4 marks for organization.)

15 Q. 4.

(4) a) (i) specialization of work.
(ii) span of management is limited.
(iii) unity of command.
(iv) chain of command.

(5) b) too mechanistic and ignores major facets of human nature, too structured to adapt to change, formal directives and procedures hinder communication, inhibits innovation, pays the job and not the person, relies on coercion to maintain control, job-defensive behaviour encourages make work, organization goals frequently incompatible with members' goals, out of date with today's needs.

(6) c) (i) behavioural model — assumes the objective of economic productivity but adds employee satisfaction. Emphasis is on horizontal systems in which control is loose, power diffused, and centers of decision making widespread.
(ii) the organic model — organizations will be temporary, focusing on current problems and organic relationships between people.
(iii) the team model — combination of the bureaucratic and organic models.
(iv) the contingency model — organizations designed according to which variables are important to the organization. Usual major variables are the manager, the work, the external environment and the employees.

11 Q. 5. Long-range planning generally refers to a time dimension. Steiner prefers to speak of comprehensive, corporate or total planning within which context planning can be described from four points of view:

a) planning may be seen as dealing with the futurity of present decisions;

b) planning may be seen as a process which establishes objectives, defines policies, describes the organization necessary, and assumes review and evaluation;

c) planning may be described as a philosophy or attitude of looking ahead;

d) planning may be viewed in terms of structure, and long-range planning refers to the development of a comprehensive and uniform pattern or programme of plans for the entire organization reaching over a long period of time.

This structure consists of:

a) strategic plans which are a loose set of major objectives, strategies, and policies;

b) medium-range plans which are quite complete, covering from two to seven years;

c) short-term plans and budgets;

d) planning studies of likely things to come.

(1 mark for each of the 8 points, 3 marks for elaboration and organization.)

13 Q. 6.

(4) a) (i) the development of models forces all participants to take a top level, overall view point of the organization;
(ii) the major thrust will be to discover and use relationships between key operating variables thus leading to improved understanding of the business;
(iii) models project over several time periods thus forcing consideration of lead/lag relationships;
(iv) it forces consideration of whether important sectors of the business are growing or declining.

(5) b) (i) it is time consuming;
(ii) prone to clerical error due to its detailed nature;
(iii) clerical effort required exhausts people leaving little enthusiasm for analysis;
(iv) few companies keep adequate historical data to do good budgeting;
v) top management often arbitrarily changes budgets to reflect their performance expectations.

(4) c) (i) facilitates the preparation of preliminary budgets;
(ii) facilitates analysis by providing management with quick, comprehensive responses to new alternatives;
(iii) allows ongoing analysis throughout the year in addition to serving the traditional control purposes.

14 Q. 7.

(8) a) The importance of this perspective resides in the fact that it prevents marketing myopia. This can be characterized as:
(i) the belief that growth is assured by an expanding and more affluent population;
(ii) the belief that no competitive substitute for the industry's product is available or possible;
(iii) too much faith in mass production and the advantages of rapidly declining unit costs as output rises;
(iv) preoccupation with products which lend themselves to carefully controlled scientific experimentation, improvement, and manufacturing cost reduction. With a customer-needs perspective, the firm works back from the customer, to delivery, to production, to location of raw materials.

(6) b) External environmental forces are:
(i) technological
(ii) sociocultural
(iii) psychological
(iv) legal-environmental
(v) economic
(vi) industry structure

100

END OF SOLUTIONS

CANADIAN CERTIFIED GENERAL ACCOUNTANTS' ASSOCIATION

MANAGERIAL POLICY 600 EXAMINATION

JUNE, 1980

Marks **Time: 3 Hours**

10 Q. 1. Litvak & Maule suggest several reasons why Canadian business should become multi-national.

Required:
Briefly, what are these reasons? In your answer be sure to explain why each factor encourages foreign operations of Canadian companies.

28 Q. 2. Explain what is meant by the strategic process as that term is used by McCarthy, Minichiello, & Curran. Be sure to elaborate on all three phases of the process.

10 Q. 3. Using materials presented in the course write a brief essay **against** business assuming social responsibility.

17 Q. 4. The M.N.O. Company has recently gone through an extensive review and revision of its organizational procedures. Emphasis on participative decision making, decentralized authority, and increased use of positive feedback were the goals. The V.P. Personnel gives his assessment of the outcome of these changes as follows:

> "Frankly, I don't know what to suggest now! My understanding of all recent social science literature led me to the conclusion that increasing the participation of our employees in decision making would increase their job satisfaction and work performance. But it doesn't seem to work that way. We still have people complaining that their jobs are too structured, while others complain that theirs are not structured enough. We have some who say management is too aloof while others say it is too friendly. Still others complain about the lack of opportunity to develop friendships at work . . ."

Required:
Using the Flowers and Coda model for human resource planning:

(14) (a) explain to this V.P. the various value systems that exist in the work force;

(3) (b) suggest what he might do now by way of policy and strategy in human resource planning.

8 Q. 5. McCarthy, Minichiello, and Curran emphasize that it is neither the product nor the market alone which defines or characterizes the firm, but rather the ''product-market scope'' which provides the definition. In spite of this it would appear that a considerable number of firms continue to define themselves either by their product(s) or their market(s).

Required:
According to Levitt in ''Marketing Myopia'', why do firms continue to define themselves by one or the other rather than both? Also, be sure to identify the fallacies in the beliefs.

16 Q. 6. The main purpose of organizing is to move toward the attainment of organizational objectives and the structural design should facilitate this.

Required:
According to Ross and Murdick, what are the various structural designs available and what are the advantages **and** disadvantages of each?

11 Q. 7. Shank & Burnell in their article, ''Smooth Your Earnings Growth Rate'', explain a technique for screening proposed capital investments.

Required:
Why would the business firm be concerned about screening capital investment proposals?

100

END OF EXAMINATION

CANADIAN CERTIFIED GENERAL ACCOUNTANTS' ASSOCIATION

MANAGERIAL POLICY 600 EXAMINATION

JUNE, 1980

SUGGESTED SOLUTIONS

Marks **Time: 3 Hours**

10 Q. 1. a) Need for command over vital resources — where raw materials are not found domestically, supply can be guaranteed by foreign investment.

b) Access to foreign markets — tariff barriers imposed by foreign governments encourage the establishment of branch plants in the local economy in order to avoid the tariffs. Also, competition may require local operation as success may be dependent upon special knowledge of the market place in the foreign country.

c) Market saturation and the drive for growth — when domestic markets have reached their saturation point, the route for growth is in foreign markets. In addition, the Canadian market is small by comparison with many foreign markets and often Canadian firms must get foreign markets to achieve economies of scale.

d) Relative scarcity of production factors — these include raw materials, labour, capital, technology, and sometimes intermediate products. When any of these are not available domestically, foreign operations may be required.

e) Tax and other financial incentives — many developing countries encourage foreign investment to stimulate their economies. This encouragement often takes the form of incentives which make it cheaper to operate in that economy than in Canada.

(2 marks for each factor — 1 for identification and 1 for elaboration).

28 Q. 2. There are three stages: (a) formulation; (b) implementation; (c) evaluation.

a) In the formulation stage the strategy maker must consider the major elements of an organizational strategy including:
   (i) the basic influences of external environment, internal resources, personal values of decision makers, and responsibilities to society
   (ii) the strategic objectives of survival, growth rate and diversification, profitability, market share, and social contribution.
   (iii) the major sub-strategies of product-market scope, bases of competition, resource allocation policies, risk horizons, and time horizons.

b) In the implementation stage, the strategy maker must consider:
   (i) the organization structure most appropriate for the strategy
   (ii) a planning procedure adequate to articulate and transmit throughout the organization the goals, priorities, plans, and policies of top management.
   (iii) a control system to inform management of how well plans are being followed and objectives met
   (iv) a motivation system to encourage employees to strive for successful achievement of the strategy
   (v) personnel procedures to provide staffing adequate to achieve the strategy
   (vi) an information system to enable the flow of information regarding plans, policies, procedures, decisions and actions.

c) In the evaluation stage, the strategy maker is primarily concerned with:
   (i) control — the measurement of the extent to which actions taken have moved the organization toward its objective(s).
   (ii) the appropriateness of the strategic objectives for the next time period.

10 Q. 3. The points necessary to answer this question are to be found in Richman "Corporate Social Responsibility and Enlightened Management" and Davis, "The Case for and against Business Assumption of Social Responsibility."

(Marks to be awarded on the basis of ½ mark for each point, to a maximum of 4 marks, and 6 marks for elaboration and organization of the answer.)

17 Q. 4.

(14) a) The value systems are:

(i) reactive — no value system, person reacts purely to sense stimuli.

(ii) tribalistic — values easy work, friendly people, fair play and a "good" boss. Doesn't like responsibility, prefers to be told exactly what to do.

(iii) egocentric — likes good pay and wants the boss to stay off his/her back. Doesn't like work which ties him/her down and works only for money. Merit and bonus systems do not motivate such people.

(iv) conformist — likes job security and well defined job rules. Likes a boss who tells what to do and rarely changes his/her mind. Money is an important motivator.

(v) manipulative — believes compensation should be based on results and likes a job which allows wheeling and dealing. Likes to have responsibility for his/her own performance.

(vi) sociocentric — prefers working with people in a friendly environment. Friendly relationships more important than task accomplishment.

(vii) existential — these employees prefer work which requires initiative and imagination. They like responsibility and money can be a motivator.

(3) b) The first step would be to undertake a survey to identify the relative presence of each value system amongst the employees. The second step would be to assess employee attributes in terms of skills they can contribute to the organization. The third step would be to make job assignments to balance organization demands with personal value systems of employees as closely as possible, keeping in mind that perfect fits are seldom possible and that people's value systems change over time.

8 Q. 5. The importance of this perspective resides in the fact that it prevents marketing myopia. This can be characterized as:

(i) the belief that growth is assured by an expanding and more affluent population;

(ii) the belief that no competitive substitute for the industry's product is available or possible;

(iii) too much faith in mass production and the advantages of rapidly declining unit costs as output rises;

(iv) preoccupation with products which lend themselves to carefully controlled scientific experimentation, improvement, and manufacturing cost reduction. With a customer-needs perspective, the firm works back from the customer, to delivery, to production, to location of raw materials.

16 Q. 6. a) Classical organization structure:

(i) advantages are that channels of communication are clearly defined, authority and responsibility are rationally assigned, the organizational hierarchy is clear; rules and procedures are spelled out

(ii) disadvantages are that it is too mechanistic, does not respond well to change; inhibits innovation; formalization hinders communication; relies on coercion to maintain control; encourages job defensive behaviour.

b) Behavioural model:

(i) advantages are that it allows more scope for employee satisfaction; power is diffused; centers of decision making are widespread; control is less coercive; more flexible and adaptable to change.

(ii) disadvantages are that structure is low and thus relies on the intrinsic motivation of employees; is inappropriate to static environments and repetitive tasks; participating decision making is time consuming; wide distribution of power places responsibility for organizational outcomes in the hands of employees who may have inadequate training.

c) Organic model:

(i) the advantages are flexibility of structure; ability to adapt to change; focused on current problems; emphasizes informal relationships between employees

(ii) disadvantages are in unclear communication patterns; too much change for some employees; organizational goals may be unclear; authority relationships may be unclear or change too rapidly for some employees; not suitable for repetitive tasks.

d) Contingency model:

(i) the advantages are that the organization is designed according to which variables are important at the time; it is tailored explicitly to organization goals; it is flexible; employees come to accept organization change as attendant with changes in strategy.

(ii) disadvantages are it may be costly; employees may not feel job security; organization change may cause internal confusion.

11 Q. 7. There are two reasons for concern:

a) external — in order to maintain steady earnings growth rates thus receiving continued favour from investors. This occurs because steady earnings growth rates allow investors to predict future earnings of the company with greater certainty.

b) internal — in order to determine the economic return of various investment proposals. Thus, under conditions of capital scarcity the various proposals can be ranked according to expected return and those yielding the highest return can be selected.

100

END OF SOLUTIONS

CANADIAN CERTIFIED GENERAL ACCOUNTANTS' ASSOCIATION
ADVANCED FINANCE 616 EXAMINATION
JANUARY, 1980

Note: Tables for the present value of $1 and the present worth of an annuity of $1 are attached.

Marks

Time: 3 hours

48 Q. 1. The Finance Committee of the Magnum Company Limited was considering four independent investment projects presented to it by the President. The following information has been presented to the Committee. *(All figures x 000).*

AFTER-TAX CASH FLOWS

	Years										
Project	**0**	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**
A	−100	40	40	30	30	30	30	—	—	—	—
B	−100	30	30	30	30	30	30	30	30	30	30
C	−100	7	7	7	7	26	26	70	70	80	84
D	−150	20	20	20	20	20	50	50	80	80	80

NET PRESENT VALUES

Project	**0%**	**5%**	**10%**	**15%**	**20%**	**25%**	**30%**
A	100	70.9	48.0	29.8	15.0	2.9	−7.1
B	200	131.6	84.3	50.6	25.8	7.1	−7.2
C	284	164.9	87.9	36.9	2.2	−22.0	—
D	290	164.3	81.8	26.2	−12.4	—	—

The NPV figures are also graphed in the attached Exhibit 1.

Required:

(10) (a) For each project determine the Profitability Index (PI) @ 5% and @ 20% and the IRR. Determine the project ranking by IRR and by NPV and PI @ 5% and @ 20%.

(8) (b) Explain why the rank orders differ.

(4) (c) If the four projects were all mutually exclusive which one would you choose, and why, if the Company's cost of capital was (i) 10%, (ii) 25%?

(d) Assume now that the four projects are independent and explain what decision the Committee should take in each of the following different situations (only complete projects are possible):

(4) (i) The Committee believes that funds for all projects could be raised at the firm's cost of capital. Which projects should be chosen if that cost is assumed to be 1) 15%; 2) 25%?

(6) (ii) The Committee estimates that $250 will be available @ 15% and unlimited amounts @ 20%.

(8) (iii) The Committee has been told by the Board that it will not approve issuing equity, so funds for investment will be limited to $250 this year and $100 next year from debt and retained earnings with a cost of capital of 15%. Which projects should be undertaken? 1) this year?; 2) next year?

(8) (e) Determine the Payback for each project. How can the Payback be used appropriately in capital budgeting?

Marks

15 Q. 2. The Excelsior Company Ltd., a merchandising firm, currently is operating well below capacity and the Sales Manager has recommended to the President that the Company increase its sales by accepting customers with a D&B rating of 1A3 instead of the present higher 3A2 rating since its gross margin on sales is 60%. The Credit Manager objects on the grounds that bad debt losses can be expected to increase sharply. The President has asked the two managers to discuss the matter and they have agreed on the following estimates and probabilities if the proposed credit policy were adopted:

Monthly Sales Increase	Proba-bility	Expense Increase*	Conditional Probability
$		$	
		500	0.2
1,000	0.2	600	0.6
		700	0.2
		800	0.2
2,000	0.5	900	0.6
		1,000	0.2
		1,200	0.2
3,000	0.3	1,300	0.6
		1,400	0.2

*Includes an appropriate estimate for the increase in bad debts expense.

They estimate that accounts receivable will increase by $6,000 and inventory by $4,500. The firm's tax rate is 45%.

Required:
If the President considers the firm's cost of capital to be 14% (after-tax) what choice should he make?

19 Q. 3. Modigliani and Miller have presented an analysis to show that dividend policy is irrelevant — i.e. that it will not affect the value of the shareholders' investment.

(4) (a) What critical assumptions underlie this analysis?

(15) (b) How does the real world differ from M & M's original assumptions and how can these differences affect a shareholder's preference for dividends versus capital gains? Explain fully.

10 Q. 4. Since a "finance" lease is roughly the equivalent of the debt a firm would incur if it bought the asset and financed it by borrowing does it really make any significant difference to a firm whether it buys assets (and finances them with debt) or contracts for them under "finance" leases? Explain fully.

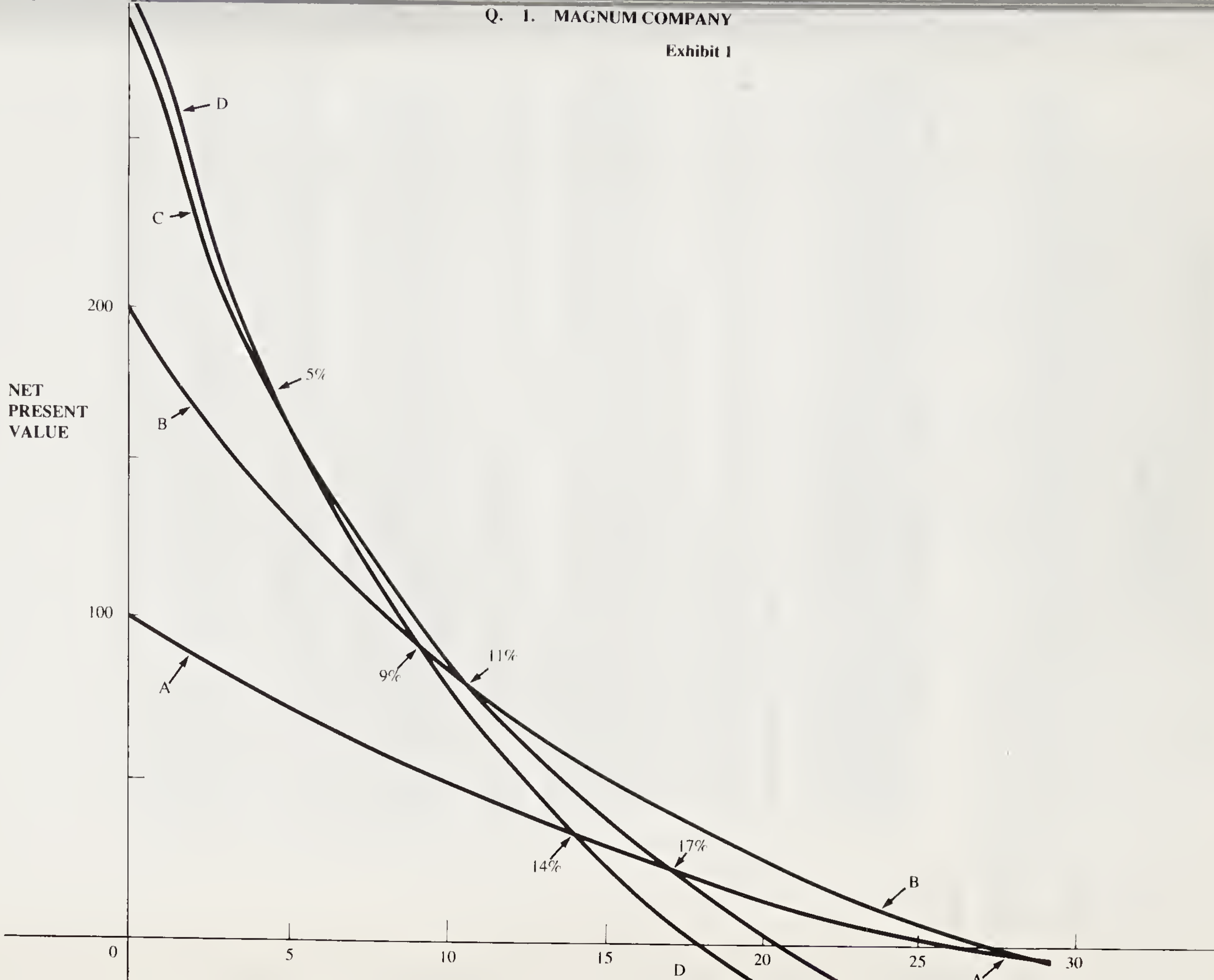
8 Q. 5. Describe the possible advantages of bringing about unified operation of a number of firms through a holding company arrangement rather than a complete merger.

100

END OF EXAMINATION

Q. 1. MAGNUM COMPANY

Exhibit 1



CANADIAN CERTIFIED GENERAL ACCOUNTANT'S ASSOCIATION
FINANCE 616 EXAMINATION
JANUARY 1980
EXAMINER'S COMMENTS

General

Many candidates spent considerable time on question 1 doing totally unnecessary PV calculations and then appeared to have insufficient time for questions 4 and 5. Possibly, partly for the same reason, many gave answers in 4 and 5 to rather different questions than those asked.

Specific

Q.1 (a) Candidates wasted time making unnecessary PV calculations. Since PI = PV inflow/PV outflow and NPV is given then PI = (NPV + Investment) / Investment (all at time O thus no PV calculations). IRRs can be determined by interpolating using PV values given, e.g., @ 25% and 30% for A. (For D, where Tables are more precise, a PV calculation @18% would improve the precision slightly.) B can be obtained directly from the annuity Table. Alternatively IRRs could be read from the Exhibit 1 graph — not with great precision but the order would be correct.

(b) Many ignored the PI rankings.

(b)-(d) Exhibit 1 was generally ignored; it gave the Fisherine intersections which made it possible to provide more precise answers to these parts.

(e) The question asked how the payback could be used, not 'what it was?'.

Q.2 The critical issues were the handling of probabilities and the proper treatment of the return on investment in inventory and receivables. Many overlooked the fact that revenue increases were on a monthly basis while return on investment is given on an annual basis. Some overlooked the gross margin figure or assumed that the cost of goods sold was included in the expense increase — which, unfortunately, was not technically inconsistent with the figures.

Q.3 Since M and Ms Theory can be shown to hold even when the perfect certainty assumption is relaxed, then that assumption was not required for an acceptable answer.

Q.4 This question was not well answered. Many simply discussed how to make a lease or buy comparison rather than dealing with the question asked which was whether it made any difference. It should not matter who gets the residual value since presumably the lessor would make proper allowance for this in determining his rental charges. But if the lessor specializes in a particular type of equipment — e.g., computers — he may typically be able to dispose of such assets for a higher price than an individual owner and he could then compete for business by sharing some of that benefit with the lessee.

Many said that leasing avoids the risk of obsolescence but this is NOT the case in a financial lease where the lessee assumes all the risks of ownership. The question was directed solely at finance leases and not 'operating' leases where the contract only *requires* payments which are small compared to the cost of the assets.

Real benefits arise from differential tax rates, differential salvage values, or differential costs of money (usually between large and small firms.) A lessor may perceive his risk to be less than a lender's because of the ability to recover possession of the asset instead of being forced into a reorganization.

Although a financial lease ought to be regarded as using up as much debt capacity as an equivalent loan this isn't always the case in practice so the possible differential effect on debt capacity was accepted as a reason.

Q.5 This was also answered rather poorly. Many dealt with the advantages of combining several firms rather than what was asked which was the advantage of combining through a holding company rather than via a merger. Some were obviously confused about whose shareholders' approval was required for what. A holding company will require its own shareholders' approval for relevant actions but it can gain control of subsidiaries by simply buying shares in the market — those shareholders aren't required to vote on anything but they would have to vote on merger. Although a holding company reduces the amount of investment necessary to control a given amount of operating assets, leverage — in the sense of altering the return on equity — only exists if the holding company utilizes debt or preferred in its capital structure.

CANADIAN CERTIFIED GENERAL ACCOUNTANTS' ASSOCIATION
ADVANCED FINANCE 616 EXAMINATION
SUGGESTED SOLUTIONS
JANUARY, 1980

Marks **Time: 3 hours**

48 Q. 1.

(10) (a)

			5%				20%			
Project	**IRR**	**r**	**NPV**	**r**	**PI**	**r**	**NPV**	**r**	**PI**	**r**
A	26.5	2	70.9	4	1.71	4	15.0	2	1.15	2
B	27.5	1	131.6	3	2.32	2	25.8	1	1.26	1
C	20.5	3	164.9	1	2.65	1	2.2	3	1.02	3
D	18.2	4	164.3	2	2.10	3	−12.4	4	0.92	4

(8) (b) Comparing the NPV and the IRR depends on the assumption about the reinvestment rate. NPV would be appropriate if reinvestment is at the discount rate and IRR if it were at the IRR rate. So long as the assumed reinvestment rate is above the Fisherine rate both IRR and NPV give the same ranking. Exhibit 1 indicates that the highest Fisherine rate is 17% so at 20% the rankings are the same while at 5% they differ. So long as the size of the investment is the same, NPV and PI give the same ranking. Otherwise they can differ based on the assumption about the earnings on the differential investment.

(4) (c) Both IRR and NPV indicate B @ 25% since we are above all relevant Fisherine intersections. However @ 10% NPV indicates C by a narrow margin. Here we are just below the relevant Fisherine intersection of B and C @ 11%.

(4) (d) (i) At 15% all four would be accepted but at 25% only A and B meet the test (Positive NPV or IRR greater than 25%.)

(6) (ii) Since we would have to raise some funds at 20% that is the appropriate discount rate and thus D would not be accepted.

(8) (iii) Since only complete projects can be undertaken we have a choice in the first period of any two of A, B and C or any one of those plus D. In either case the Company must forego investments yielding 18% to 20%. From the graph it is evident that at any discount rate in the 17% to 25% range the order of decreasing NPV is B, A, C, D. Thus we choose B and A. (The IRR gives the same results since we are above the Fisherine rates.) We will now have $150 available in the second year and could choose either C or D. Since C's NPV is higher than D's at discount rates above 14% we should choose C leaving the Company with $50 available for a future year.

(8) (e) A — 2.67: B — 3.33: C — 6.29: D — 6.00 (in years).

Payback can be used as a measure of risk. C and D are riskier than A and B since their major cash flows are in the later years. Weingartner refers to Payback as a constraint to be satisfied rather than a criterion to be optimized. Only if Payback is defined as the period necessary to earn the minimum required return on investments does it enable us to reject *all* unacceptable ones.

15 Q. 2.

Monthly Sales Increase	**Margin Increase**	**Prob.**	**Expense Increase**	**Cond. Prob.**	**Gain (Loss)**	**Joint Prob.**	**Net Gain (Loss)**
$	$		$		$		$
			500	0.2	100	0.04	4
1,000	600	0.2	600	0.6	0	0.12	0
			700	0.2	(100)	0.04	(4)
			800	0.2	400	0.10	40
2,000	1,200	0.5	900	0.6	300	0.30	90
			1,000	0.2	200	0.10	20
			1,200	0.2	600	0.06	36
3,000	1,800	0.3	1,300	0.6	500	0.18	90
			1,400	0.2	400	0.06	24
						1.00	300

Marks

Thus the expected increase is $300 per month or $3,600 per year before tax and $1,980 after tax. The additional investment required is the increase in Accounts Receivahle and the increase in Inventory — i.e. $10,500. Since the increased revenue presumably continues forever the after-tax return on investment is 18.9% which is greater than the required 14% so the President should accept the recommendation to reduce credit standards. (This answer is consistent with the Text and Lesson Notes. However most writers consider that the appropriate figure for the investment in receivables is the out-of-pocket cost — i.e. $6,000×0.4 — and not the selling price. Using this figure the return becomes 28.7%.)

19 Q. 3.

(4) (a) Perfect capital markets and rational investor behaviour (i.e. investors prefer more wealth to less).

(15) (b) There are three major effects.

(i) Information. Corporate managements are normally reluctant to cut dividends so they generally do not increase the rate until they are quite certain it can be maintained. Since management is assumed to be most knowledgeable about the business, investors take a dividend increase as evidence of a long-run improvement in the firm's position and the value of the shares rises. Of course this is essentially a matter of timing; the shareholders would presumably become aware of the improved position eventually; and if the expected improvement is not forthcoming or does not persist share prices will decline again.

(ii) Taxation. Dividend income and capital gains are usually taxed at different rates. In the absence of a significant dividend tax credit, as in the United States, capital gains are generally preferred to dividends since taxes are less. However in Canada with the recent increase in the dividend tax credit most investors will pay less tax on dividends than on capital gains. Value will be maximized by choosing the dividend policy appropriate for the class of investor likely to be attracted to the particular firm. With capital gains the investor can usually choose when to take them.

(iii) Transaction Costs. A firm will normally incur substantial costs in selling securities since investment dealers must be compensated and there are legal, accounting and printing costs. Capital obtained through the retention of earnings incurs no such costs. The investor who wishes to obtain income from non-dividend paying shares will be forced to sell some shares and since it will normally be a small amount the transaction costs will be high. However it is usually the costs to the corporation that are the more significant. Firms with highly profitable investment opportunities will retain earnings since they can appeal to investors who are looking for capital gains. Others — such as utilities — will appropriately appeal to investors requiring income regularly by paying dividends even though they must then bear the costs of raising capital in the markets. Each firm thus maximizes the value of its shares.

10 Q. 4. The CCA and any investment tax credit will be most valuable to the investor paying the highest tax rate and valueless to a non-taxable investor. A large firm may be able to buy the asset cheaper, raise money more cheaply in the market and often dispose of the asset on more favourable terms. These savings can be split with the lessee. Provided the asset has alternative uses (and particularly if it also is moveable) the lessor's risk will typically be less than a lender's.

8 Q. 5. Approval of the shareholders of the companies is not required provided sufficient shares for working control can be acquired through the market. Obviously acquisition of a minority interest requires less investment (or the issuance of fewer shares) than in a merger. Since each unit is a legal entity, risks are compartmentalized and reduced for the group as a whole. Finally, the holding company arrangement permits the pyramiding of leverage and thus greatly increased returns for the parent if things go well.

(Marks: 2 for each of the four points given above.)

100

END OF SOLUTIONS

Date Due